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Model A-and-a-half?

It is beginning to look increasingly unlikely that a "Model B" national body will get established this side of the next General Election. Of course, the reasons for this have almost as little to do with education as had the DES's original decision last winter to pump for a centralist and corporatist solution to the tangled problems of the management and control of non-university higher education and to sweep away almost a century of local authority control of the polytechnics (in their proto form) and the colleges.

The reasons, of course, come from the world of micro- and macro-politics. At the micro level it seems almost impossible to negotiate, draft, and pass such a complicated piece of legislation as will be required by a "Model B" solution which demands a categorical end to local authority responsibility. The transfer of ownership to institutions with a strange, new and possibly uncomfortable corporate status, the creation of a new structure for determining salaries and conditions of service (especially for non-teaching jobs), the establishment of a new national body, the evolution of its basic financial and administrative procedures, all these are very complicated and time-consuming questions which can hardly be answered in time - in time, that is, for any new arrangements to be in place before and so to influence the contraction of the non-university sector on which the Government is so stubbornly determined. At a macro-level the choice between a "Model A" and "Model B" national body is certain to be soon engulfed by the all-out war between central and local government on mighty issues such as referenda

before rate rises, or politicized manipulation of the block grant. Under these conditions it is all too likely to become a stagnant and quiet sector of the front where both sides dig in for a long war, and even quite probable that the establishment of a national body for the colleges and polytechnics might become the object of "trade" between central and local government with unknowable consequences.

This is not a happy outlook. It would be just as unfortunate if those who believe that too tightly drawn a national body would reduce the very necessary diversity of non-university higher education and establish new and oppressive boundaries saw their point of view prevail for the wrong reasons, as it would be for the advocates of a more centralized approach to ride to success on the back of cuts and contraction.

So even if the political impetus behind the present debate on the future of the polytechnics and colleges suddenly evaporates, as it may well do, that is no reason to end the debate. Indeed the very contrary should take place. The debate should be widened and made more public. At present there is too much behind-the-scenes jostling for sectoral advantage with some polytechnic directors reviving the proposal for a "satellite" system of polytechnics and prizes for guessing the respective Academic Awards uneasy about any loss of influence or stature that might flow from the creation of a new national body on a centralized pattern and so being edged into the intrigue for defensive purposes.

What is required instead is a much fuller debate. No one can be happy about the present condition of the management of the non-university sector. Even without the much to be deplored contraction some more rational "system" would have to be created for the polytechnics and colleges. It is simply unrealistic to imagine that uncoordinated local authority provision marginally modified by some semi-compulsory recruitment scheme can produce and sustain a strong higher education alternative to the universities.

The real issue then is not whether there should be a national body or not, but rather whether the arrangements for a national body will be those which prop up sectoral privilege - and so flow against the democratic intentions of Anthony Crosland's binary policy - or those which maintain and increase the diversity of non-university higher education and so provide the radical extension of higher education for which Anthony Crosland argued and planned. But if it is by now fairly clear that Model B would come too close for comfort to the former arrangements, it is very doubtful whether Model A even approximates to the latter. Therefore what must and maybe will emerge is "Model A-and-a-half", some arrangement that makes a positive virtue out of plural control, rather than simply acting as a defensive work to protect local authority territory. The details of such an arrangement would be very difficult to work out, but before that task can even be attempted the spirit of such an arrangement has to be firmly established through public debate. That is the immediate task for the polytechnics and colleges.

Rothschildization and the SSRC

The reorganization of the committee structure of the Social Science Research Council, which will receive the council's final approval today, is easy to caricature. Replacement of discipline-based by issue-related committees can be seen as a victory for a narrow, quantitative, mechanistic, even ethically and politically neutral, approach to the social sciences, and as a defeat for a broad, qualitative, and engaged approach.

But beneath the caricature there is enough truth to provoke considerable unease about the direction forced by the SSRC is taking or being forced to take. Of course, any research council must try to keep a proper balance between the nurturing of purely academic initiative and the academic investigation of the public issues that excite political society. "Timeliness and merit" is the traditional phrase to sum up this necessary balance.

Yet there is little evidence that the SSRC in its previous configuration was in danger of slipping into academic obscurantism. Most of the social science disciplines are by their very nature extrovert in their preoccupations. So it is difficult to see how the new committee structure, however neatly divided into issue-related categories, will be able to stimulate socially relevant research more successfully than the disciplines themselves acting through the old structure.

Indeed there is a danger that by appearing to undermine the basic disciplines the SSRC new committee structure may depress at an already difficult time the status of the social sciences still further. After all, many of the social science disciplines are not the strong, self-confident, even over-mighty networks that make up subject disciplines in the natural sciences or even the humanities. Their

often precarious self-esteem needs bolstering not buffering. Although there may be a strong case for the imposition of tough national research priorities in science and engineering, partly because of the strength of the basic disciplines, partly because of the great costs involved, there is a much weaker case for *dirigisme* by the SSRC.

In any case, if the process of Rothschildization is carried too far, the foundations of the research council system are undermined. After all, the SSRC abandons too absolutely its role as a sponsor of academic research and too recklessly adopts a new role as a surrogate customer for applied research, why not transfer its budget to the real customers, the Government departments, local authorities, and other agencies? At best the case for the SSRC reorganization is not proven.

A favoured maverick

There is more than a touch of irony about the application for a Royal Charter by the University College at Buckingham. While the recognized universities reel under the impact of the most severe cuts in their history and the maintained sector waits for tighter controls and the rationalization of courses, a single maverick institution goes from strength to strength under the benevolent eye of the Government.

Already students at Buckingham have been awarded mandatory grants at a time when many of those on course in institutions validated by the Government for National Academic Awards have to struggle for an ever-diminishing number of discretionary grants. Now the college seems set fair for a Charter which, whatever its public stance, will mean further state support for an institution which is privately independent and was established precisely to break the

monopoly over higher education. Buckingham itself says that a Charter would make no practical difference since its licenses are sufficiently widely recognized already. It would merely correct an anomaly and bring the college into line with other institutions. Such a view hardly does justice to the value of a properly recognized degree in the eyes of potential students and employers. Much more likely is a considerable expansion in demand for places and an extension of the institution's while the Government's greater standing continues.

Not surprisingly, the Association of University Teachers, the Committee of Vice-Chancellors and Principals, and the CNAA, have all expressed their opposition to the college's application. The Privy Council, which is supposed to be the final arbiter in the case, has no guarantees

either about academic standards or financial security at Buckingham. Courses are still incompatible with existing degree programmes, despite the standing of some of the college's external examiners, while financial difficulties have been openly admitted.

In the circumstances, those polytechnics with designs on self-validation will ask quite reasonably why Buckingham should be accorded a status denied to them. The colleges and institutes of higher education, many with long-standing reputations and well-established relationships with universities or the CNAA, might also wonder what makes them inferior to the university college. If the Privy Council makes such a concession, it should reach the conclusion that Buckingham has a long way to go before its self-appointed university title is given formal currency.

Laurie Taylor



You're looking brown.
Yes. Got a bit of a tan, I'm walking about, you know.
Very impressive.
Well, soon wear off in this sort of weather.

Italy again? Siena, isn't it?
No. We went down to Turkey this year.

Really?
Mmm. Decided to have a go. Got a bit tired of the old year after year.

Splendid. What's it like?
I heard rather mixed reports.
Oh absolutely first-rate. No doubt about it.

Not all fixed bayonets and doner kebabs?
Not a bit of it. 'Course there's still the curfew in Istanbul but quite honestly, if you get right down into Asia you hardly notice it.

Asia?
Yes. Over the Bosphorus Bridge and then more or less straight along the coast to the Aegean.

Good swimming?
Excellent. Very clear. Don't see bits of Greek ruins under the water.

Not spoilt yet?
No. Very undeveloped. Hardly saw any other English in the whole four weeks.

Sounds splendid.
I'd recommend it. D'you go away yourself?

Yes. Just for a couple of weeks.
Well that's something anyway.

Oh yes.
Where'd you go?
Prison, actually.
Prison?

Yes. Had a silly spot of bother over some books which they claimed I'd more or less stolen from W. H. Smiths and got sent down for a fortnight.

Really?
Yes. Quite unexpected. Out of the blue.

Whereabouts?
What's that?
Where'd you go?

Oh, Armley.
Isn't that Yorkshire?
Yes. Sort of Leeds. More or less on the edge of the Dales.

Oh yes, I know. Sort of Ebor and Skipton way?

That's right.
Not too far from Bronte country?

You've got it.
Was it at all overcrowded? I've read somewhere that it's usually three to a...

No. Not too bad at all. But of course I was over in D Wing and that's well away from the young crowds.

Oh well. You look quite fit at it.

Yes. It was certainly a change. Well, that's the main thing. Exactly.

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Ten years of The THES, 11-15

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Cross-channel clash on cuts strategy

from Paul Flather

An *entente cordiale* between Britain and France broke through the bureaucratic surface at a conference on higher education policy for the 1980s organized by the Organization for Economic Cooperation and Development in Paris this week.

Senior civil servants and academics from the 24 OECD member countries were told that Britain was setting the international pace in cutting expenditure on higher education and in curtailing the difficult decisions about priorities that flowed from these heavy cuts.

But Mr. Alain Savary, Minister of Education in President Mitterrand's new socialist government, said that France rejected this policy of contraction and instead planned to create 30,000 new places in higher education, and also to relax "obstructive and sterile centralization".

However, most nations seemed to be closer to Britain than to France in their priorities for higher education over the next decade. The consensus was that the 1980s would be a period of considerable strain for universities and colleges in all industrialized countries with contracting expenditure, declining enrolments, and growing graduate unemployment.

Six main areas of strain were identified:

- Autonomy: With new pressures on the system universities would have to be more accountable to social and economic needs.
- Admissions policies: With almost every nation enrolling more adult students, entry qualifications and traditional modes of study would have to be changed to increase access.
- Funding: Contracting budgets would force institutions to find alternative private sources of funding, ways of raising fees and new systems for student aid.
- Courses: Graduate unemployment suggested courses would need to be made more relevant with a complete review of the links between working life and higher education.
- Tenure: As a major sticking point

leading to rigid staffing policies and allowing little room for financial manoeuvre, this principle would have to be reviewed.

Research: Discovering new sources for finance, the need to review the traditional discipline set-up as against the more problem-orientated and relevant research, and the balance between teaching and research would have to be reconsidered.

The British delegation stressed that the biggest single dilemma facing policy makers was whether individual institutions could respond of their own accord to the pressures for change.

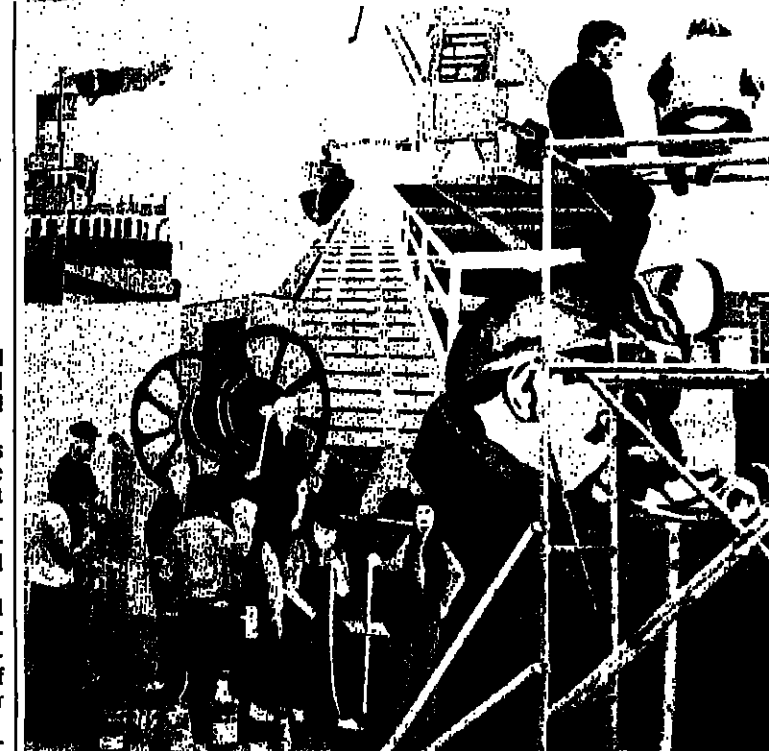
Noel Thompson, under secretary at the Department of Education and Science, told the conference that if institutions did not respond public disengagement would grow and so would the political pressure to intervene more from the centre.

With Australia, Canada, Belgium, and the United States all planning serious cutbacks in spending on higher education, only Norway seemed to be following France in rejecting the inevitability of contraction.

Elsewhere there seemed general agreement that since 1975 higher education had been passing through "a crisis of confidence." Background statistics supplied by OECD showed that after a steady and sometimes spectacular rise between 1965 and 1975 expenditure on higher education fell significantly after 1975.

The last five years had also seen a fall in higher education unit costs, which might reflect economies of scale but could also suggest a fall in quality. "This deceleration effect might inflict a permanent scar on the future academic standards and vitality of higher education systems in most advanced countries," the OECD paper says.

The figures, the most recently available, show that between 1975 and 1978 Japan, the United States, the Netherlands, and Britain, all cut their share of national income on education, but the largest drop from 5.2 to 4.4 per cent was in Britain.



Three unemployed teenagers who set to work on a giant mural have done so well that they have been offered places on an art and design course at South Shields Marine and Technical College.

Michael Rankin, Kenneth Mesle and Christopher Howe, all aged 17, were working on the mural in Commercial Road, South Shields as part of a Youth Opportunities Programme project. Their supervisor, Mr David Wilkinson, a fine art graduate from Sunderland Polytechnic, was so impressed with their work that he helped them get a portfolio together.

Merrison rethink

by Robin McKie
Science Correspondent

A serious crisis is threatening the Merrison committee which is currently investigating the creaking dual-support system, the mechanism by which research is funded at universities.

At its meeting today it was expected that the committee would be forced to completely change the recommendations and conclusions of its draft report because of the cutbacks inflicted on universities.

The seven-member working party, organized through the Advisory Board for the Research Councils, is chaired by Sir Alec Merrison, the ABRC chairman and includes Dr Edward Barker, chairman of the University Grants Committee. Its report, originally scheduled for completion last March, will not now be ready until the end of the year and

may not be made public even then. The committee was established in April 1980 to propose methods for improving the dual-support system which involves the UGC in providing cash for laboratories and the research council in topping this up with money for special equipment and researchers. Research councils had become concerned they were spending too much money on routine equipment and the committee was also expected to investigate the awkward age structure of staffs of science departments.

One possible solution could have involved increased selectivity in support for strong and weak university departments. But the committee's original thinking has been thrown into disarray by the Government's decision to slash 15 per cent from university funding.

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Sir Keith's national body swerve

by John O'Leary

Civil servants and local authority officials were having their first meeting today in what is seen as a climb-down by the Department of Education and Science over the control of polytechnics and colleges.

In his first policy initiative since becoming Secretary of State for Education, Sir Keith Joseph last week asked the local authority associations to consider proposals for a Council of Local Education Authorities' scheme than the department's own.

Although consultation is to continue on the Green Paper, the suspension of the interim agreement, which is expected by next

month, will be translated into a permanent national body. The new proposal is for "common funding", recommended by the Stephen Joseph group, to form the basis of a national funding system.

A new body composed of DES officials and local authority representatives, advised by Her Majesty's Inspectorate, would then allocate "further funding" in order to produce a more sophisticated allocation. Final decisions would be in the hands of ministers since the new group would be purely advisory.

The proposal, though welcomed in principle by all sides, have encountered criticism from those excluded under the DES proposals. The Council for National Academic

Awards criticized the plan for lack of academic credibility.

The Committee of Directors of Polytechnics is also concerned about the lack of academic or managerial membership in the proposals. The arrangements should not be seen as a substitute for debate on the Green Paper, said chairman Dr Ray Richett.

The DES paper on the interim arrangements expressed the hope that a new system could be in operation in time to influence allocations for 1982-3, but local authority representatives at today's meeting will cast doubts on the feasibility of such a speedy introduction. They, too, are expected to be convinced about the proposed membership, which may include an independent chairman.

Students rush for poly places

Polytechnic intake is up by at least a quarter this year following a rush of applications from students affected by the cuts in university recruitment.

Unemployment, a rise in the number of 18-year-olds and the growing popularity of the polytechnics are also being put forward as reasons for the massive rise, which includes an improvement in the quality of students as well.

The biggest rise so far is at Teesside Polytechnic where preliminary figures show a remarkable 40 per cent rise in first year numbers, with more to come as late entrants register for the few courses with vacant places.

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Notice of job losses withdrawn

by Ngalo Crequer

Keele University has withdrawn the notice it gave to the Department of Employment that 300 staff could be made redundant. Lecturers, furious at not being consulted, had threatened to consider industrial action.

Dr Roger Seifert, secretary of the local AUT said he received a letter from the Department of Employment to say they had been notified of up to 300 dismissals starting from April 1982.

"I immediately telephoned the vice-chancellor to say that as the unions had not been informed the university was probably in breach of the Employment Protection Act", he said.

"As they had not specified where the redundancies would occur this was also probably a breach of the charter and statutes, and it was definitely in breach of all agreements we have with the university."

Vice-chancellor Dr David Harrison said: "The possibility of redundancies was identified in the summer and the university informed the DoE. The unions construed this as a change of policy and to emphasise it was not, we withdrew them. The council was not told of the procedure because it was routine, but the unions did not see it as routine."

Meanwhile a Southampton University committee, which estimates that 226 jobs might have to go, has suggested that individuals proposed for redundancy should be named in February. It says deans may consider identifying staff whose departure would cause least harm to future academic viability of departments.

At Aston University the Association of University Teachers passed a motion of no confidence in the vice-chancellor, Professor Frederick Crawford, and later the academic assembly passed a motion of no confidence in his policies with regard to the cuts.

At the University of Manchester Institute of Science and Technology the academic board defeated three motions which proposed alternative strategies and bans on future appointments.

Professor Robert Haszeldine, UMIST Principal, who has a vote as chairman of the board, voted against one motion, which was lost by one vote. The meeting heard of one proposal to cut the department of polymer and fibre science by 55 per cent, European studies by 50 per cent, and 40 per cent each in chemistry and physics. UMIST is also to go ahead with three new appointments, a chair in applied robotics and two directorships.

Lancaster has considered a report which academic staff and some 70 of 70 academic staff and some support staff. At East Anglia the UGC has reopened discussions about the future of the Keswick Hall site, which may now be sold. A decision was also expected this week on a proposal to merge Bedford and King's Colleges, London.

The Universities Central Council on Admissions has circulated schools with a list of more than 40 degree courses which have been discontinued since its handbook went to press last February; 16 are at Aston and 12 at Lancaster.

Dundee considers a closure

by Olga Wojtas
Scottish Correspondent

Dundee University's department of education is facing closure despite surviving the University Grants Committee's list of recommended cuts. A proposal to close the department has been made by a three-man working party whose report will go to a faculty meeting next week.

The working party of the vice principal, dean of the arts and social services faculty and the chairman of the extramural committee was set up before the UGC letter was received. There was an unsuccessful attempt to close the department several years ago and when the education professor retired two years ago, his chair was not filled. A working party then defended the course saying they not only had high standing and intrinsic worth, but that they provided links

between the university and schools and colleges in the area.

The current report points out that the department teaches only post-graduate students, and adds that there is a contraction of teacher training.

But the department says that in recent years it has been able to include in undergraduate teaching, and points out that although the intake for its DipEd course is expected to decline, the enrolment for its MED has remained fairly constant while the number of its research students has risen in four years from two to 20. The diploma course is attended by postgraduate students from Dundee College of Education, while the MED course has included students from occupations other than teaching.

The working party recommends that the four members of the academic staff be transferred to

other departments where they could continue their research.

It is uncertain how much money would be saved through closure, but the only salary saved would be a secretary's.

It is only recently that Dundee has announced that there will have to be compulsory redundancies as voluntary redundancies have been fewer than expected, and it is thought the university will declare a state of financial emergency next week.

If the faculty accepts the working party's recommendation, it is expected that the senate would also approve it, and the education department would then be an obvious target for compulsory redundancies.

At present, staff are trying to rally support for the department within the faculty, and they have also approached the Education Departments of other Scottish universities.

Staff aim for quality control of director

by Charlotte Barry

Lecturers at the North East London Polytechnic have told governors the qualities to look for when they appoint a new director next Friday.

The NELP co-ordinating committee of the National Association of Teachers in Further and Higher Education said in a letter sent to all governors that the polytechnic's survival would rely on a new director with an outstanding track record.

Proven ability should include a high academic standard and strong leadership to enable close liaison with any new national body and the Council for National Academic Awards; and sufficient managerial skills and credibility to deal with the appropriate local and national government departments.

News in brief

Leicester sets up teacher centre

A study centre for teacher education is to be set up at Leicester University with the help of a £100,000 grant from the Department of Education and Science.

The Centre for the Evaluation and Development of Teacher Education is the outcome of a recently completed IT-INSET project at Open University in which 20 colleges and polytechnics experimented with a new programme in teacher education.

Groups of students accompanying their tutors worked in schools with teachers for one day a week for periods of up to a year. The whole process was thoroughly analysed and evaluated.

Legal notes

Comprehensive lecturer notes for a law course at North London Polytechnic have been published by its student union.

Union president Mr Abdul Tader, said: "The notes will replace traditional lectures and the law available will be used to deal with specific student problems. We believe such initiatives are vital if modern competition is to be removed from education."

The notes are a complete account of the law course on PNL's BA in law. They are the outcome of two years work by the student union's law workshop in collaboration with the lecturer on the course, Angus Sydenham.

Director appointed

The new director of the Science and Engineering Research Council teaching company scheme is to be Professor D. W. Saunders who will succeed its present director Dr J. Wallace. Professor Saunders will continue to work in his present post as head of Cranfield Institute of Technology's polymer group and will act as a part-time director for the teaching company scheme - a programme jointly funded by the SERC and the Industry Department which integrates university research and industrial manufacture.

Double jubilee

Leicester University is to mark its double jubilee by offering six scholarships to local residents. The John Friers scholarships named after a former chairman of council is equivalent to fees for one undergraduate or postgraduate course. The university celebrates 60 years since its foundation as a university college and 25 years since its charter was granted.

Name change

The constitution and title of the Universities Council for Adult Education provision have been altered to make provision for expanded activities in the field of continuing education. It is to be known as the Universities Council for Adult and Continuing Education.

Honoured

Two academics at Plymouth Polytechnic have been given International honours. Dr Sidney Irvine, of the psychology department, has been given the 1981 Simon Bles Award Medal for Major Scientific Achievement, for his study of psychology in Africa and Mr David Morley, dean of the faculty of maritime studies, has become the first member of the Maritime Transportation Board not to be a United States citizen.

Tories 'must legislate on training proposals'

Legislation will be necessary to ensure that recent proposals on the future of education and training become a reality, Mr Jack Mansell, director of the Further Education Unit argued this week.

Without it, and without changes in the attitudes of Government, employers, unions and society, no real progress would be made, he told a special conference in Wembley.

"We will destroy the ecology of our workforce and without doubt confirm by default our willingness to become a divided, unequal third-rate nation," Mr Mansell said in response to the Manpower Services Commission's consultative document 'The New Training Initiative'.

He believed that the formal education system had to complete its own re-appraisal of how it could provide a service better matched to the needs of the majority of school leavers.

SSRC workers strike

by Charlotte Barry

Striking civil servants picketed the meeting of the Social Science Research Council in London last Friday to protest against lack of consultation about threatened redundancies.

The council wants to cut staff numbers by 13 next year following the reorganization of its subject committee and panel structure. This would lead to the sacking of four out of 12 senior scientific officers who serve the 15 committees.

The committees are to be replaced by six multi-disciplinary committees. The 19 staff, who are members of three civil service unions and the Association of Scientific, Technical and Managerial Staffs, say this will lead to more rather than less work.

The heavier workload will be caused by the greater emphasis on research initiatives and development, a new system of committee budgets, more consultancies and the growth in research grant applications, the unions claimed during the one day strike.

They were also angry over the refusal of SSRC chairman Mr Michael Posner to allow them to put their views to the council meeting.

An ASTMS shop steward said: "Our position is that these figures were drawn out of thin air and the staffing needs of the new structure had not been properly worked out."

After the meeting, at which next year's financial estimates were discussed, the SSRC issued a statement offering further consultation with staff before a final decision was made by the chairman. The four unions met at the end of this week to discuss further action.

Council members also discussed the financial details of its restructuring programme, but came to no firm conclusions. They agreed to meet again in December, instead of January as scheduled, to thrash out comments received during the period of open consultation which ends on November 20.

The identity of the new committee chairmen or women is expected to be announced in two weeks' time.

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Poly rush

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Numbers in the first year of the BSc course in social studies have doubled from 36 to 73, with similar increases in the humanities, public administration, civil engineering, computer technology and mechanical engineering degrees. Ironically the maths and computer science degree courses lost a few students at the last minute to the universities.

Leicester Polytechnic's intake is also up by 40 per cent to 700 after more than doubling in 1980. It reports a big influx of women to first year courses.

At Middlesex and Sheffield the number of first year students has risen by 25 per cent so far compared with the same time last year. Middlesex reports 500 extra students on full-time and sandwich courses with a 30 per cent jump in the number studying humanities. A spokesman said that a large number had been attracted from the pre-degree courses for mature students in the humanities and social sciences.

Superstardom Polytechnic's intake has risen by 36 per cent, and the number on first year science courses has doubled from 165 to 386. In the last three years, the polytechnic has been experiencing a growth of only about three per cent a year.

Forquith reports a rise of 24 per cent in the first year intake, and numbers ate up by 627 overall. A spokesman said: "We had expected to record more in engineering and science."

At Plymouth first year numbers have risen by 16 per cent from 1530 to 1770, and there has been a significant increase in students on business studies, environmental sciences, physical science and the combined studies programme.



Princess Anne pictured at this week's ceremony at which she was installed as Chancellor of London University. Her first act as chancellor was to confer honorary doctorates of law on Lord Charters of Amsfield, a former private secretary to the Queen, and on Mr Sheridan Ramphal, secretary-general of the Commonwealth. Also in the photograph are the university's principal, Mr Hamish Stewart (left), and the vice chancellor, Professor Randolph Quirk (centre).

Overseas fees 'under review'

by John O'Leary and David Jobbins

The Government is to review its policy of full-cost fees for overseas students in the light of new figures available next month following last week's debate on student mobility at the Commonwealth heads of government conference in Melbourne.

Although the prime ministers stopped short of calling for Britain and other countries to reverse policies which are reducing opportunities for Third World students, they agreed that "early and sympathetic consideration" be given recommendations from the consultative group which met in London over Easter. It had set out a framework for increasing the number of students from developing nations of the Commonwealth.

Included in the report were proposals for a new Commonwealth plan for higher education, as well as recommendations that individual countries should set fees at "considerably below full-cost." The group had also asked for an expansion of bursary schemes to benefit the poorest students.

The final communiqué from the conference did acknowledge that there was widespread concern that fees were creating impediments to the movement of students. But no specific recommendations were included to remedy the situation. It will now be for governments to reconsider their attitudes in the light of the report.

Although the outcome was a disappointment for pressure groups which saw the conference as a last do so when we have the figures for this year.

least, some saw the communiqué as a hopeful sign.

Such a move came on Tuesday with a pledge from Dr Rhodes Boyson, under-secretary at the Department of Education and Science, that the Government would keep its word and reconsider its policy in the light of figures to be produced next month.

Although no longer responsible for higher education, Dr Boyson had previously agreed to address Conservative graduates at a fringe meeting at the party conference in Blackpool. He told them: "I shall be interested in November to see what the figures are. We did say we would look again within the remit of the money available. We shall certainly do so when we have the figures for this year."

BEd numbers at danger level

Recruitment to Bachelor of Education courses throughout the public sector is still dangerously low and has not recovered to pre-1980 levels in spite of a slight upward trend in the national picture.

Figures provided by the Clearing House at the deadline for 1981 courses show that applications rose marginally by 0.98 per cent to 11,676.

Last year many institutions, in particular the polytechnics, failed to meet their target quotas, and nationally the BEd recruited only 60 per cent of its total DES quota of 9,500.

A random sample survey of ten colleges and polytechnics shows that this year the picture is far more patchy, but that on the whole recruitment reflects the marginal increase in applications.

Out of the sample, two colleges - City of Liverpool and Bournemouth - recruited above their targets. Hull College of Higher Education nearly met it, while the remaining institutions, except Liverpool Polytechnic F. Calder Campus, increased their recruitment by between 20 to 40 students each, although they failed to meet their quotas.

Among these are five institutions which last year were at the bottom of the league table. For example La Sainte Union College which last year had an intake of 49 students on a target of 120, this year achieved 73.

This picture is repeated at St Mark and St John College whose intake last year was 50 on a target of 90 and has now diminished to 70 students. Manchester, Newcastle and Portsmouth Polytechnics, particular poor recruiters last year, have all increased intakes by about 20 students.

Among the reasons given for the slight increase in recruitment is that last year was a fluke created by new requirements for English and maths O levels qualifications which few students were able to meet. Institutions now feel that with one year's warning, the position has improved.

The dangerous position of the BEd is also being confirmed by the latest DES statistics on the employment of graduates from education courses. These show that in 1980 only 69 per cent of BEd students as compared to 75 per cent in 1979 succeeded in obtaining teaching posts, while 77 per cent of PGCE leavers from universities and 74 per cent from non-university institutions were successful.

Limit tenure, says Boyson

Academic tenure will have to be given later and on more limited terms than now, Dr Rhodes Boyson, under-secretary at the Department of Education and Science, told a fringe meeting at the Conservative Party conference this week.

Dr Boyson was impressed by moves to restrict tenure in Japan and Korea, which he had just visited. Their tenure has recently been reduced to one year for an assistant lecturer, two for lecturers, four for assistant professors and six for professors.

He said the general public would not continue to support arrangements which gave tenure more easily here than anywhere else in the world.

"I know from my postbag there is no general sympathy for that," he said.

Supporters of the student banded from Manchester Polytechnic for refusing to pay his union fee have called on the Secretary of State for Education Sir Keith Joseph to set up a public inquiry at a meeting of the Freedom Association.

VCs unveil redundancy proposals

by Ngao Crequer

Vice chancellors have prepared a draft redundancy plan which marries elements of civil service and National Health Service schemes with the existing premature retirement scheme.

The draft outline emerged after a meeting of the general purposes committee of the Committee of Vice Chancellors and Principals and will be put to all vice chancellors at the end of this month. The University Grants Committee has been sent a draft.

The scheme is intended to be a model which could be supplemented by universities own schemes and the hope is that the UGC and Government will respect it as a guide when they decide how much money to make available for redundancies.

The details of the scheme are being kept secret by the committee but the lower end of the scale is thought to be very much less generous than others being considered at individual universities. A number of these were considered at the general purposes session.

It would have to be approved by both the Inland Revenue and the Comptroller and Auditor General.

It is understood that lump sums of one, two, three and four years annual salary were considered as possible compensation payments, by the committee. Age will also be a crucial factor.

The committee also considered the possibility that lectures with tenure would pursue to take redundancy but still pursue breach of contract cases through the courts. But the meeting also heard advice that fewer lecturers than previously thought had cast-iron tenure.

British company wins Oman contract

A British group has won a multi-million pound contract for a new university in Oman. The university, which will eventually have places for more than 1000 students, is one of the largest planned in the Middle East and will have five faculties. These will probably consist of engineering, science, medicine, agriculture, and Islamic studies.

The contract said to be worth between £200m and £500m, has been awarded to an all British team consisting of YRM International, the London-based architects, who will be responsible for the overall planning and designs and Cementation International, part of the Trafalgar House group of companies, who will carry out the construction work and installation of equipment.

The new Qaboos University, as it will be called, is to be built at Rusai which is about 19 kms from Muscat, the capital of Oman.

The final master plan for the university is currently being prepared.

CBI chief joins attack on UGC cutbacks

by David Jobbins

Criticism of the way the cuts in university budgets have been distributed has come from the president of the Confederation of British Industry, Sir Raymond Penneck.

On the BBC Radio Four programme *Any Questions* he said: "I abhor it purely on the grounds of self-interest and the economic welfare of the country."

He opposed the way academics had decided where the cuts must fall - in areas where the closest relationship with technology and business.

But Sir Raymond, who made clear his support for Thatcherism generally, sought to absolve the Government of blame for the strategy he so deeply disagreed with.

"The Government had said the reduction must be X. But it is the academics who have decided where the cuts must come," he expressed regret at the gulf

between industry and the universities. Most of the contemporaries in West Germany were professors in contact with undergraduates, "I have seen little of that in this country."

Deputy Leader of the Labour Party, Mr Denis Healey, said he was appalled at the "insensate folly" behind the cuts in areas where this country was in competition with Japan and West Germany.

He insisted on laying the blame at the Government's door. "The Government has abdicated its responsibility to decide what pattern of education is best for the country to the University Grants Committee."

Both agreed on the shortage of technical and technological training in Britain. Mr Healey said that this could not be put right by dealing with the universities alone. "You have to produce a connexion between school education and industrial training which has been totally lacking."



Essex University has appointed Paul Gutzee as resident theatre writer until March 1982. He will write a play, the *Plutocrats*, for the university's MA drama students to rehearse and produce, as well as providing a script for a Peterborough-based theatre company.

Call for strong youth service

The youth service must play a particularly strong and effective role in areas of social deprivation, the interim report of the Department of Education and Science youth review group advocates this week.

"There are many areas where this presence is manifest and effective but just as many where it is not. It is not always a question of the total amount of resources in money and buildings, but often of choosing the right policy, using resources to the best advantage and taking steps to mobilize and encourage voluntary efforts of many kinds," the group which is chaired by Mr Alan Thompson, former deputy secretary at the DES says.

The group whose main report is not due until next summer presented an interim statement to the Secretary of State for Education and Science, in the belief that this would advance its work and sharpen the debate on the youth service.

The review group argues that unemployment is only one of the major causes that has led to the alienation

of young people. It believes that many of the younger generation has been deprived of a whole range of experiences which they need to recognize the rights and responsibilities of adulthood.

"This basic alienation is what matters most. If the causes are not sought out and dealt with, the national calamity which may result seems likely to transcend the immediate effect of particular outbreaks of violence," it warns.

The group points out that no one agency can deal with so many forms of deprivation. It is necessary for the youth service working with other services such as further education and unemployment, in an equal rather than supplementary role.

For this reason, it believes the youth service should continue to offer a wide range of experiences. Ultimately, it believes, neither a greatly enhanced youth service or work can supply all the experimental needs of young people. They need social education to maintain their confidence in themselves and society.

Surrey goes into partnership

Surrey University and Guildford Borough Council are to develop a research park which will promote activities in science and technology and create hundreds of new jobs.

The idea, once planning permission is granted, is to landscape a site west of the new Royal Surrey County Hospital.

The regional health authority, supported by the university is considering plans for a postgraduate medical centre and an education centre for nurses and para-medical staff next to the hospital.

The developments are intended to benefit local residents and to provide increased opportunities for professional development and access to research facilities by medical staff.

The research park is intended to provide opportunities for practical experience for undergraduates during

their sandwich industrial year, as well as employment prospects as the park develops. The staff of the university will benefit from the activities of the research park.

But no industrial manufacture will be permitted at the research park. "This development will therefore promote the economic well-being of the locality without any of the disadvantages associated with large-scale industry and will provide opportunities for new and well paid employment," a spokesman said.

Sites will be available on long lease to research institutes and research departments of major industries working in association with university research activities.

The university and council are to set up a joint working party to advise on how the development should proceed.

All systems go for satellite

Britain's first educational satellite, UOSAT, which was built by Surrey University, is now responding to this university's command station.

The satellite's navigational equipment has been switched on, the crafts' temperature is being kept stable and its beacon signal has been received by ground stations, following the launch from Vandenberg, California, last week.

But this success has come about only after an anxious period when the satellite failed to respond to ground signals. Within 12 hours the cause was traced and UOSAT is now operating according to its programme.

The satellite, built by the university's electronics engineering department for £80,000, will mainly study how the ionosphere affects radio transmissions. It will not begin its experimental programme for several weeks while various instrument tests are monitored by ground station scientists.

Once in full operation, it will broadcast information on a voice synthesizer which will "speak" in English so the signals can be easily picked up by school stations and amateur radio enthusiasts.

Writers' Fellowships

1982/83

The Arts Council hopes to offer a limited number of grants to educational institutions in England for the establishment of Writers' Fellowships tenable for a period of two years beginning in the academic year 1982/83.

Interested institutions are invited to contact the Deputy Literature Director for further details. Arts Council of Great Britain, 9 Long Acre, London WC2E 9LH. Tel: 01-379 6697.

Closing date for completed applications: 31 January 1982.

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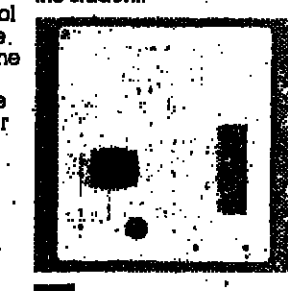


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Union ready to go to court over tenure

by David Jobbins

Accountants may be brought in to check the books of universities which threaten to make staff redundant.

The Association of University Teachers, which has lawyers standing by to take legal action against breaches of tenure, confirmed it was ready to use accountants to tackle exaggerated claims about the size of deficit.

"We have accountants ready in case some hawkish vice chancellors are exaggerating their deficits to justify redundancy," AUT general secretary Mr Laurie Supper said.

"In some places we may have a struggle in our hands in getting access to the books, but we shall use our rights under the Employment Act to do so."

The possibility of overkill by a number of vice chancellors emerged following talks between AUT officials and local branches over the past two weeks. "The deficits assumed over the next three years exceed the amount of the cuts in total," Mr Supper said.

Leaders of the campus unions decided this week not to block all moves by their members to strike on November 18, the day of the Parliamentary lobby.

They agreed not to recommend strike action but recognised that individual branches might wish to. They have told branches who decide on this course only to go ahead if all the other unions at their institution also strike.

Academics, technicians, white collar and manual workers were represented at the meeting which put finishing touches to the plans for November 18.

MPs expected to address meetings in the Commons grand committee room include Labour and Liberal education spokesmen Mr Phillip Whitehead and Mr Alan Beith, and chairman of the Conservative Parliamentary education committee, Sir William van Straubenzee.

Union leaders are also expected to speak at meetings in the Central Hall, Westminster.

The AUT has chartered six special trains and a fleet of up to 50 coaches for the lobby. Trains will be running from Glasgow, Edinburgh, Manchester, Liverpool and possibly Bristol and the north east. Each train can take at least 600 people.

The action is expected to lead effectively to the closure of universities on the day, and the National Union of Students has called on its members to use the opportunity for local activity around the issues of cuts and unemployment.

Students at Salford University, hardest hit in the round of cuts, are gearing themselves for tomorrow's mass rally there. Speakers at a rally NUS president Mr David Aaronovitch, National Union of Public Employees national officer Mr Harold Wild, and Salford East MP Mr Frank Allau.

Student union president Mr Jim Mooney said support for the march was expected from local trades councils, and students from universities and polytechnics including Strathclyde, Bradford, Aston, and Newcastle.

Messages of support have been received from Labour leader Michael Foot, Tony Benn and Liberal leader Mr David Steel.

SDP's shape of things to come

by John O'Leary

Radical proposals for reshaping the higher education system contained in a discussion document written by Mr Tyrell Burgess, reader at North East London Polytechnic, escaped relatively unscathed from the Social Democratic Party's first debate on education.

Considerable criticism was levelled at Mr Burgess's document for its stance on public schools and for sins of omission. But an array of well-known figures from the world of higher education let pass suggested policies which would include bringing the universities under local authority control.

Comment on higher education policy was mostly confined to criticism of the Government's performance and that of the University Grants Committee, together with a number of generalized statements of intent.

The debate was launched by Mr John Roper, MP, the SDP education spokesman in the House of Commons, who described the UGC's method of apportioning cuts as "desperately mistaken." The cuts were hitting the most essential part of higher education and had taken no account of the universities' overall effectiveness or the quality and employability of their graduates.

Mr Roper also called for a new structure to oversee the department of the system. There should be a careful examination of whether the arbitrary division between the universities and the polytechnics should be removed.

However, Mr Richard Lewis, finance officer of Middlesex Polytechnic, criticized Mr Roper for neglecting the plight of the maintenance sector. And he contrasted the criticism directed at the public schools to the silence over the value

of Oxford and Cambridge Universities to the education system as a whole. "Perhaps it is that some politicians are rather more loyal to their old universities than to their old schools," he said.

Mr Lewis said it was the general view that Britain had not been well served by the system. He likened it to playing rugby with a cricket ball - too small and the wrong shape - and condemned Mr Mark Carlisle for complacency over the declining participation rate while he was Secretary of State for Education.

Both he and Mr John Bridgen, a lecturer at Preston Polytechnic, took issue with proposals to place all higher education under local authority control. Mr Bridgen said Mr Burgess was looking at the authorities through rose coloured glasses, contrasting the corruption, ignorance and intimidation which he had seen.

Russian joins arms talks

Informal discussions at Edinburgh University between Soviet and British experts on defence and international relations have resulted in a call by both sides for nuclear arms limitations.

Seven Soviet experts, headed by Professor Vitaly Kobish, a member of the Communist Party Central Committee, attended the "Edinburgh Conversations" which had the theme of survival in the nuclear age.

The meeting, held on the initiative of the Scotland-USSR Society and organized by the head of Edinburgh's defence studies department, Professor John Erickson, follows a similar meeting held last year in the Soviet Union.

Most of the participants in the team headed by Professor Erickson were academics from Edinburgh University, but the team also included General Sir Hugh Beach and Lord Ritchie-Calder.

Despite differing political outlooks, the participants jointly produced a series of conclusions over three days of talks which they believe will influence both American and Soviet policy. These state that any moves towards arms limitation and disarmament must be encouraged, and that it is essential to sustain a continuing political dialogue.

There is serious alarm, the conclusions continue, over plans to include any weapon such as the neutron bomb in European arsenals which lower the nuclear threshold.



The anti-bomb message is being brought home to students with a 2,000-mile tour of 54 colleges in 14 days by two National Union of Students minibuses. The minibuses are packed with publicity material and films including *The War Game*, banned by the BBC, and the aim is to gain support among students for the Campaign for Nuclear Disarmament national demonstration in London on October 24. One of the vans is pictured being prepared by NUS executive member Mr John Anzani, who will be speaking at meetings.

Help for Hongkong college

An Open University academic has been chosen to start Hongkong's first open learning college, Professor Don Swift, of the OU's educational studies faculty, has started a two-year secondment as the college's founding principal.

The new college will offer degree courses to the thousands who have been unable to find a place in Hongkong's overstretched higher education system. Unlike the Open University, students must have traditional university entrance qualifications.

Courses will be in mathematics, technology, science and business studies, all taught in English. The college materials will be bought from

other distance learning institutions like the OU, but Professor Swift does not intend to import the OU system of about six-year-long courses each worth only one credit. He prefers a degree made up of many more credits.

Course materials including radio and television cassettes will be used in conjunction with considerably more face-to-face tutorials than the OU provides, because of the concentration of population.

The privately-sponsored college, which is being developed under the auspices of the newly-established University of East Asia, hopes to enrol its first students next year.

Sussex lecturers prepared to sue

by Ngao Crequer

Lecturers at Sussex University, which may have to shed 235 staff to prevent insolvency, said this week they would sue for wrongful dismissal if any academics were declared compulsorily redundant.

Association of University Teachers spokesman Dr Joe Taylor said: "We would certainly sue, our position is quite clear. Our major regret is that the university has turned a purely financial crisis into an academic crisis, turning department against department."

A report of the group to review income and expenditure (GRIP), which was being discussed this week by the planning committee, concludes that the university faces insolvency during 1982-83 unless cuts are made or income increased. The reduction in staffing costs would mean a loss of 235 jobs, 111 of them academic.

The report says it would be irresponsible not to give early consideration to the possibility of compulsory redundancies, but it does not refer to

tenure, already a matter of dispute. The GRIP report states that the University Grants Committee letters imply a reduction in income of some 21 per cent between now and 1983-4.

It examines reasons for reduced activity including: English, pro rata reduction of 20 per cent in posts; philosophy, loss of three posts out of 14; politics, 20 per cent reduction; education, 20 per cent reduction; logic and scientific method and history and social studies of science, closure; mathematics, reduction.

Other recommendations are a 50 per cent cut in expenditure on community services including ending the lodgings service, running down the Gardner Arts Centre and not renewing short term contracts of faculty posts withdrawing expenditure on the university health service by 1984 (except for occupational health), and a 20 per cent cut in cleaning.

The report considers other ways of increasing income such as charging overseas students more than the prescribed minimum fees, renting out

university accommodation and releasing money tied up in stocks and shares.

A working party report presented to City University, which concludes that a reduction of 150 staff is necessary to make the required savings, also pinpoints the departments where job losses may fall.

It recommends negotiating a loan to cover deficits, reducing the purchase of periodicals by the library by one-third and initiating a priority scheme for books, that proposals be made to effect staff economies in the health and counselling services, that charges for sports centres usage be considered and that the Kings Building be relinquished before the end of next year.

Three MSc courses, in water engineering, mathematics and adhesion science should be ended, some aspects of engineering courses be examined, chemistry should be asked to reduce the number of its degree courses, and degree courses in social science and humanities and in general studies, be reviewed.

The principals, he said, enjoyed enormous prestige in Scottish society, but they also had responsibilities towards society. "So far their performance has been extremely disappointing. It's high time they put their leadership into a campaign to protect Scottish education for everyone in the country."

Mr Sillars called on the eight principals to unite and lead a crusade in defence of the educational system.

"This campaign is not going to be won by quiet diplomacy or retreating into ivory towers," he said.

Labour MP Mr Dennis Canavan, whose constituency includes the university, told the rally that the Scottish Parliamentary labour group had pledged maximum support for Stirling's campaign against the cuts.

The University Grants Committee's whole philosophy seems to be "If they're young and if they're

Scottish principals 'must unite to fight the cuts'

by Olga Wojtas

Scottish Correspondent

The former MP and current vice president of the Scottish National Party, Mr Jim Sillars, has attacked the Scottish university principals for not fighting strongly enough against the cuts.

Mr Sillars, who is the honorary president of Stirling University's student association, was addressing a rally attended by about 3,000 of the university's students and staff. Stirling is the worst hit of the Scottish universities, with a cut of 26 per cent.

The principals, he said, enjoyed enormous prestige in Scottish society, but they also had responsibilities towards society. "So far their performance has been extremely disappointing. It's high time they put their leadership into a campaign to protect Scottish education for everyone in the country."

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Fears for Iranians' safety

by David Jobbins

The Home Office is being asked to grant refugee status to Iranian students who fear they may otherwise be sent home to increasing civil strife.

The UK Immigrants Advisory Service and the UK Council for Overseas Student Affairs have issued a joint call for the relaxation of immigration rules to allow Iranians who risk deportation leave to remain on humanitarian grounds.

They have also advised Iranians whose leave to stay in the UK is about to expire to apply immediately for an extension.

Particularly at risk are students who have received no money or communication from their parents since the revolution. Many are from families associated with the late Shah's regime or active in anti-Khomeini Mojahedeen factions in this country.

"Many Iranians in this country simply do not know where their families are or even if they are still alive," a UKCOSA spokesman said.

"They hear rumours of mass executions, disappearances and persecution which - even if not true - add to their fear and uncertainty."

The two organizations say they are seeking application of policies as applied in the past to Zimbabweans, Cypriots, Lebanese, Ghanaians and Afghans.

But the Home Office said this week that blanket refugee status was out of the question. It was clear that Iranians wishing to remain in the UK once their leave to remain or visa had expired would have to establish that specific danger prevented a return.

With the Home Office deciding each case on individual merit, a UKCOSA spokesman said: "The only course open is to err in favour of the individual, ensuring that a person is protected against possible danger to their life and freedom can be called an error."

One group at risk are anti-Khomeini students, particularly on the left, who have completed their studies and are required to leave the country to comply with the terms of their entry to the UK.

Leeds university student union deputy president Mr Jim Murtagh said: "We have six students here who have finished their degrees and whose visas will run out at the end of October and will then have to go home. If they are known Khomeini opponents they fear that what has happened in the case of French students who were executed on arrival at Tehran airport will happen to them."

A unique company of two specialists in the Victorian magic lantern show gave its first performance this week at the Crawford Centre for Arts, St Andrews University. Mr Melvyn Heard and his wife, Chris Bradwell, in Whites Wonders Victorian Magic Lantern Show, include a cross-section of original melodramas, ballads and moral warnings dating from the "Phantasmagoria" horror shows of the 1790s to the coming of the Bioscope, which saw the lantern's demise.

Group looks at collaboration

by Ngao Crequer

The Swinerton-Dyer committee, originally set up to make recommendations about non-medical provision with London University, has been asked to investigate wider collaboration between the city's universities and polytechnics.

Professor Randolph Quirk, vice chancellor of London University, has told the committee of academic organization, chaired by Sir Peter Swinerton-Dyer, that he feels it is no longer appropriate for them to make a final report. Instead he wants a third and final discussion document, looking rather at London's central activities.

He has also asked for the committee's suggestions on other facets of the university, possibly including "the wider question of collaboration with other institutions of higher education in London."

He said: "What would be admirable would be a mini-Robbins for higher education in London."

Within London, there was the university, which cost about one-fifth of all university money, but there were also City and Brunel uni-

versities, seven or eight polytechnics and Goldsmiths College.

One of the messages of the Swinerton-Dyer inquiry had been to 'get together' within London. Professor Quirk said that some London University schools were up to 15 miles apart, but some were only splitting distance away from polytechnics.

"I have floated the idea with Ted Parkes (chairman of the University Grants Committee), and he is very strongly in favour of it. It is absurd that lines of communication should lead in totally different directions."

Professor Quirk stressed that he had set up new machinery, a number of subject area review committees, to consider immediate problems and to maintain an overall supervision. Their first reports were expected in January.

The Swinerton-Dyer committee has been asked to produce a discussion document by December, concentrating on the research and teaching institutes; central library provision; the students union and sports facilities; the botanical supply unit; careers advisory service; student accommodation; university entrance requirements; safety; industrial

relations and training advice; administrative computing services; the core secretariat in Senate House; the external degree system; extra-mural and audit visual work; and Millport and the nuclear reactor centre.

As much of this is concerned with the university's central activities Mr Hamish Stewart, London's principal comes off the committee.

Professor Quirk said the new subject review committees were not doing an emergency job. "They are beginning a process of reafforestation and this is an ongoing process, quite unlike Flowers or Swinerton-Dyer. The solution to the problems of London University has to be done by internal machinery. These review bodies are necessary adjuncts to that."

"I am desperately trying to hold back the individual schools from having to commit themselves to an academic future purely on grounds of financial exigency before we can suggest the best ways to survive on a more rational arrangement of resources."

There was no pot of gold in reserve, he said.

OU students angry over double fees

by Charlotte Barry

Open University students now pay fees which are twice as high as undergraduate part-time fees in conventional universities, according to the OU students' association.

The association, which represents 70,000 students who study at home, is demanding a meeting with Mr William Waldegrave, the new under-secretary of state for higher education, to discuss the anomaly.

At the moment Open University students pay fees of £98 a year, plus £75 for summer school. Over the average six years spent studying for an honours degree they can expect to pay a total of between £1,200 and £1,800 in fees, depending on the number of summer schools attended.

Under new University Grants Committee regulations part-time undergraduate students at traditional universities pay at a rate that is a quarter of the full-time equivalent.

This means that a part-time undergraduate student completing a standard three-year undergraduate course in four years will pay fees totalling about £700 over that period.

Ms Pam McNay, the Open University student president, said this week that the new regulations meant that OU students were being forced to pay twice as much for studying at a distance, rather than in a traditional lecture room.

"If we finish up with a situation where OU fees are considerably higher than elsewhere then it will increase the discrimination against those with families, on shiftwork and who live a long way from the nearest higher education institutions," she said.

A spokesman for the Open University said that it was supporting the complaint.

Free sport for unemployed

Student union sports and recreation facilities at Leeds University are being opened to unemployed people attending centres for the out-of-work in the city.

About 70 people are so far eligible but union deputy president Mr Jim Murtagh said: "We hope that by Christmas we will be able to say that any unemployed person in Leeds will be able to come in to use facilities on the same basis as students."

The union is to enter talks with the university authorities and the Association of University Teachers to open the library and run short summer courses for the unemployed.



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A levels need vocational angle, says lecturers' union

by Patricia Santinelli

A call for more emphasis on vocational in the A level curriculum and other full-time academic courses has come from the National Association for Teachers in Further and Higher Education.

In its submission to the House of Commons Committee on Employment, Natfhe argues that the specialized approach of A levels is damaging. Young people would benefit from a broader curriculum with some emphasis on vocational and social needs before proceeding to higher education.

The union also believes that the vocational courses greater attention should be paid to the personal development of young people.

"For far too long our young people have suffered from being divided into academic sheep and non-academic goats. All our young people need adequate preparation both for the appropriate level of employment and also for personal and social life," says the submission.

Natfhe argues that not only the education, but also the UK's attitude to the education and training of young people is to blame for the

Cash aid for cancer cure

Edinburgh University is to launch a programme which could result in mass production of a natural anti-cancer substance found in a tropical plant.

The American National Institute of Health has given a grant of £200,000 to a team headed by Professor Ian Scott who holds the chair of organic chemistry.

Vincristine, a substance found in minute quantities in the Jamaican periwinkle plant, was discovered 25 years ago as an effective drug in the treatment of certain types of blood cancer or leukaemia.

A major problem has been the production of vincristine in sufficient quantities for therapy, as literally acres of the plant must be grown and tons of matter processed to make tiny quantities of the drug possible. Professor Scott's team is to try to find vincristine's basic metabolism, which would eventually allow biotechnologists and genetic engineers to develop laboratory techniques enabling the drug to be synthesized in large quantities.

Professor Scott said: "We are certainly not about to produce a cancer wonder drug."

● Youthaid has issued an appeal to all young organizations and those working with the young unemployed this week to join its "Give us a Future - Jobs for Youth" campaign which it has launched with the TUC and other bodies.

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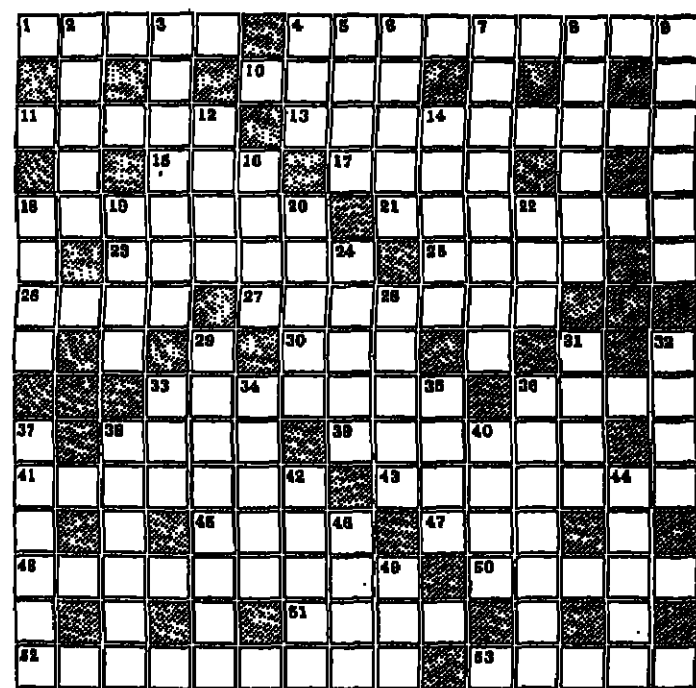
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 - Head of a chapter
 - Denizen of the ultimate ditch
 - Frequently under observation
 - What's in this stands out
 - 23 Fluffy word
 - 26 If the end of this gets in the way the whole may result
 - 27 Returns (verb)
 - 28 Heraldic gold between mother and me
 - 29 Out of court (verb)
 - 30 Upset this value and get a sharp reproof
 - 31 Intensity satisfied
 - 32 In some hands the things become trumpets
 - 33 A religious service
 - 34 A religious service
 - 35 Time measurement
 - 36 Ladies in promising mood
 - 37 Presents are commonly this
 - 38 Get the best
 - 39 Hall in Scotland may mean team
 - 40 Works, but usually plays
 - 41 They're dead
 - 42 Only a conformation could do this on a chair
 - 43 Happen afterwards
 - 44 Climbing fastest in man
 - 45 A terrestrial glider
 - 46 The final result
 - 47 The little devil on our money
 - 48 Employed, especially
 - 49 Time measurement
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North American news

Firms reap benefit of research

from Deborah Kasouf

WASHINGTON

Universities facing cutbacks in government funding on both the federal and state levels, are turning to the private sector for aid for basic scientific research. The private sector, however, is demanding something in return.

Although corporate contributions currently total only 6 per cent of the almost \$3 billion spent each year on basic university research, those contributions have risen dramatically this year.

Private grants to the Massachusetts Institute of Technology (MIT) rose from \$6m in 1979 to \$18m in 1981, with one corporation, Exxon, financing an \$8m project on combustion research.

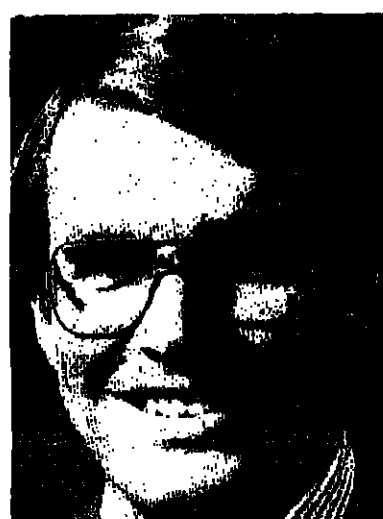
Harvard Medical School received a \$6m grant from Dupont this year for genetic research, and Columbia University, reflecting the growing trend, has hired a director of corporate relations in an effort to attract more sponsors.

One type of private funding which is becoming more prevalent is the contract grant, which often allows the donor corporation to review research findings prior to publication, grant exclusive patent rights to the corporate sponsor, and in some cases keep key research data secret from the company's competitors.

Washington University's School of Medicine in St. Louis, Missouri, recently signed a \$3.8m three-year agreement with a St. Louis Medical Supply Company which is interested in the university's biological research.

In exchange for the funding, the university will give copies of all resulting scientific papers to Mallinckrodt, Inc. prior to their publication. If any of the findings are marketable, the university will hold the patent and receive royalties, and Mallinckrodt will hold the exclusive licence to market the product.

Carnegie-Mellon University in Pittsburgh, Pennsylvania, has entered into a contract grant agreement with Westinghouse. The university will receive \$5m to fund the Robotics Institute and in return, Westinghouse will receive first patent rights on any research findings.



Dr George Keyworth, President Reagan's science adviser and director of the White House Office of Science and Technology Policy, has been unable to protect research from the spending cuts.

MIT is currently considering a proposal from a private philanthropist, which if approved by the school's board of trustees, would result in a unique partnership between a university and an independent research institute.

The proposal involves a \$7.5m endowment to the university from Mr Edwin Whitehead, an industrialist from Greenwich, Connecticut, along with the creation of a new \$120m independent institute for biomedical research whose scientists would become professors at MIT.

Mr Whitehead, who heads Whitehead Associates, a venture capital concern which specializes in investing in new concerns in the biotechnology field, had originally planned to establish a charitable institute for advanced basic research in developmental biology headed by Dr David Baltimore, Nobel laureate in medicine, the idea of linking the institute with MIT originated with Dr Baltimore, who is currently an American Cancer Society professor of microbiology at MIT.

The Whitehead Institute for Bio-

medical research, would be created to concentrate on research in molecular genetics, or developmental biology at the cell level. It would be a non-commercial institute which would follow the university's policy on patents, licensing private businesses to use the research results on a non-exclusive basis.

The director of the institute would come from MIT and the university would be involved in selecting seven of the institute's 14 trustees. In return, the institute would appoint 20 professors to the biology department of MIT, which currently has 40 members. The institute would pay the full salary of the new professors as well as tuition and stipends of the graduate students working under them, according to Mr Robert Byers, a MIT spokesman.

"I believe very strongly that unless a research institute is tied very closely to a university, it won't be as good," said Dr Baltimore, who added that the proposal would help MIT continue to grow at a time when federal funding for education is becoming less reliable.

"I think it's a very appropriate thing for universities to expand by establishing independent entities that can operate on their own and don't put universities further and further in the jeopardy of the government," said Dr Baltimore.

No clear consensus of opinion regarding the proposal has been reached by MIT faculty members, according to Mr Byers, but some faculty members have voiced their opposition to the plan.

"This plan threatens to change the nature of higher education," said MIT biology professor Mr Sheldon Peiman. "We lose control over our faculty appointments, we lose control over our graduate students, we lose control over the direction of our research."

However, one thing MIT would be getting is unrestricted use of the income from a \$7.5m endowment, which Mr Byers said would be used to "support teaching and research of our own professors in the department of biology." And it is this factor which may ultimately influence the MIT board of trustees when they meet in December to consider the proposal.

Canada study needs funds

A new initiative has been launched in eight countries to promote the development of Canadian studies outside Canada.

Some 4,000 universities, colleges and individual academics formed the International Council for Canadian Studies at a meeting in Halifax, Nova Scotia earlier in the year. Now the members are being asked to raise funds to allow the new organization to begin operating.

The eight countries in which the council will have its first associations are the United Kingdom, Australia, Canada, France, West Germany, Italy, Japan and the United States. Academics in other countries, including Iceland and Denmark in the first instance, are to become associate members where no formal organization exists for specialists in Canadian studies.

A series of biennial conferences will be held in Canada, the first scheduled for 1983. Other activities will include the establishment of an information sharing programme to allow members to keep abreast of developments in the field.

The organization has grown out of the Association for Canadian Studies in Canada, which has 600 members.

Phone recruits

Universities in Ontario have been able to make unsolicited telephone calls to prospective students wavering over their choice of institution this year. Since for the first time in eight years, since 1973 they have been restricted by the Council of Ontario Universities to calls requested by applicants.

Now they have been allowed to provide information or counselling to enable applicants to make up their minds, although comparisons with other institutions remain banned.

Overseas news

Certificate delay disrupts term

from John Walsh

DUBLIN

The start of the academic year in Irish higher education institutions has been disrupted because of a five-week delay in issuing Leaving Certificate results for would-be students.

The certificate doubles as a terminal examination for the second level and as an entry qualification for the third level. Civil servants in the Education Ministry refused to issue scripts to examiners because of a pay dispute in the summer.

The row has since been settled but the delay has caused problems for the colleges where the academic sessions are now getting under way, several weeks behind in some cases.

College administrators also face other headaches, not least because of financial cutbacks and freezes on many staff appointments.

A 30 per cent fee rise has sparked off an angry reaction from students which could lead to militant action in the colleges.

This year the Union of Students in Ireland has its most radical leadership for some time - its president, Mr Brendan Dorris, is a Maoist and supports strong action in defence of students' interests.

Staff are also restive. The Irish Federation of University Teachers has joined with primary and secondary teachers' unions in campaigning against education cuts.

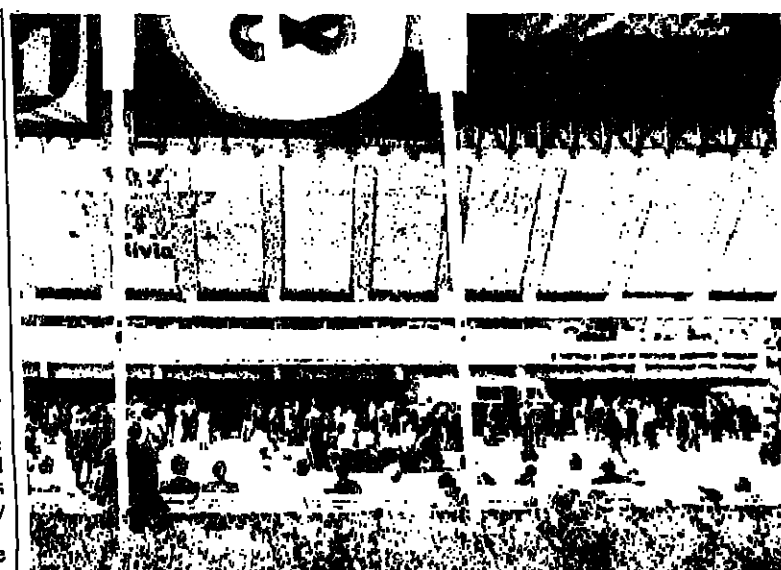
The federation has clashed with the Education Minister, Mr John Boland, over the extent of cuts in higher education; the minister claims that he has been very generous to this sector since coming to office and says that banks were threatening to refuse to honour cheques from two universities before he had bailed them out with a substantial cash injection.

But it is in the area of pay, or rather special pay increases, that the greatest threat of disruption lies. The government has sent colleges and other public sector bodies a memorandum telling

them to oppose all special pay claims no matter what their merits. The institutions have been told to invoke the "inability to pay" clause of the national pay understanding between employers and trade unions. The instruction even applies where institutions have the money to meet such claims. The embargo hits the federation which had a number of pay claims in the pipeline for junior, academic and library staffs.

The combination of frozen posts and the clampdown on pay prompted former Trinity College, Dublin provost, Dr F. S. Lyons, to warn that the cooperative spirit of Trinity staff would disappear if exceptional pressure was put upon them and there were already signs of this spirit being strained.

Dr Lyons, in a private letter to the Higher Education Authority, said the impression was growing in the college that government policy on pay was not being applied with absolute consistency or fairness.



Solidarity's congress looks at long-term objectives

Solidarity sets its aims

The first national congress of Solidarity in Gdansk, adopted a wide-ranging programme on education. Although many of the detailed objectives - such as increased funding for research and an increase in the import of academic journals - are practically impossible granted Poland's disastrous economic situation, the programme is more than a pipedream or long-term statement of intent.

It reflects the growing concern of Solidarity that control of all vital social issues should be transferred from the government and party to society at large. The education of the younger generation, the Congress resolved, is a concern of the union and of the whole of society, and must not "serve the interim goals of the authorities".

The education system must respect the right of young people to live in truth, guarantee to all equal opportunities for a good start and further development, and promote the correct mental and physical development of the younger generation.

The resolution was based on the findings of the congress's special working group on education. The group stressed, in particular, that education stimulates a love of freedom and tolerance, and therefore the existence of censorship was an evil which could only be tolerated on a limited and temporary basis. There must be no compromise, they insisted, on the censorship of learning and creative arts, nor on the "right of a nation to know its own history".

The role of Christianity in the history of Poland, and the cultural aspirations of the country's ethnic minorities should therefore be accorded due significance. Finance - a recent cause of controversy between academics and the government - should, said the working party, be left in the hands of the

institutions concerned, within the limits of their budget. Possibilities of establishing "social" funding of education and learning, parallel to the government system, should be explored and encouraged. Decentralization and self-government of academic and cultural life must be implemented, and higher education based on the "pluralism" of views and made independent of the "ideological and political demands" of the state authorities. The lack of funds for pure research caused the working party considerable alarm. If these were not forthcoming, they said, the standard of higher learning in Poland would go rapidly downhill. At the same time, there was no hint of academic criticism - the "barriers" between the Polish Academy of Sciences and less prestigious institutions, they said, should be removed, the employees of the academy should be given a chance to work with students, and extension courses for workers should be promoted.

Special attention should be given to eliminating "blind alleys" in pedagogic theory, restoring the prestige of the teaching profession, and, in conjunction with Rural Solidarity, raising the disastrously low standard of education in the countryside.

Ambitious as this programme seems, the working group was not prepared simply to back any proposal, however grandiose. One motion tabled for discussion was the idea that Solidarity should have its own private university, based at Szczecin. This would, presumably, be feasible - on the analogy of the Catholic University of Lublin. After some heated discussion, however, the working group finally decided that the proposed "Solidarity University" would have to be considered at a later date.

Nationalists promise return from 'Bedlam'

by Carl Sievin

The Maltese shadow minister of education has pledged a return to normality and a genuine renovation of the island's university if the Nationalist Party wins the next election. This will be held by the end of February next year, within three months of the dissolution of Parliament due in November.

Dr Ugo Mifsud Bonnici attacked the government of Mr Don Mintoff for destroying the university's autonomy, subjecting it to political control, lowering its standards and reducing its international status.

When Mr Mintoff took power in 1971, higher education was divided between the autonomous Royal University of Malta, which dated from 1798, the Malta College of Arts, Science and Technology, also known as the polytechnic, and two teacher training colleges run by Catholic religious orders. In 1978, the New University was created, taking over some of the old university's faculties and all the work of the other institutions.

Gradually, the New University expanded and the supposed merger in 1980 effectively marked the abolition of the old. The joint institution was headed by the rector of the New University.



Dr Mifsud Bonnici: against merger

University, Dr Donald Walsyn-James who is on secondment from Newcastle University, while the rector of the Old University, Professor Edwin Borg-Constanz, Maltese and a strong critic of the government's higher education policy, simply found his post abolished.

The process of change, according to Dr Mifsud Bonnici, has been marked by governmental interference at all levels from major policy to administrative details, which has made it impossible to maintain the university's former standards. He cited "examples of Bedlam" ranging from the attempted

abolition of both resit examinations for students who fail the first time and monthly assessments during courses which were intended partly as a replacement for the resits, to the disruption of the faculty of medicine in the wake of the doctors' strike which started early in 1977 and still in a sense continues. As a result, Maltese medical qualifications are no longer recognized by the British Medical Council.

Since 1978/79, all students have been involved in the student/worker scheme which, said Dr Mifsud Bonnici, Mr Mintoff found on a visit to China although it was rapidly abandoned there.

The scheme has had a disastrous effect on students who, the shadow minister claimed, "now only have time to attend lectures and cram for examinations," rather than obtaining the full benefits of higher education. The tasks they are given to do during their work periods are often completely unrelated to their studies or even worse, likely to detract from them as in the case of first year medical students who were made to spend their time preparing corpses for burial.

The positive part of the Nationalist policy has not yet been formulated in detail.

David Jobbins on the college lecturers' pay claim

On the side of the picket line

The key battle in the coming college lecturers' pay round could be fought out not in the Burnham committees but on the picket lines and cleaners' picket lines.

Local government manual workers are first in the queue to tackle head on the 4 per cent cash limit on pay settlements, and the chances of lecturers both in the public sector and the universities securing more depends on their success.

"There is a clear recognition this year that whatever happens to local authority manual workers is virtually going to determine what happens to all other staff - administrative, professional, technical, clerical and teachers in schools and colleges," said Mr Ron Keating, chief negotiator of the National Union of Public Employees.

The manual workers this week lodged a claim for pay increases which would at least maintain living standards, a shorter working week and longer holidays. It is directly in line with a model claim put this week before the TUC local government committee for adoption by other unions in the same sector including college lecturers.

Figures published last week show that living standards are falling. All the gains since the winter of 1978-79 have been wiped out and the manual workers' claim implies a demand for at least 12 per cent, with inflation expected to continue at double figures for the foreseeable future.

Ministers are banking on the fear of unemployment and anxiety about rate levels next year to moderate claims. They believe that unions who are fighting public expenditure cuts and redundancies will not have the stomach for a major confrontation with the local authorities over pay.

This is why the grand alliance of local government unions, endorsed by the TUC last month in Blackpool and now in its final stages, assumes major importance.

Mr Keating said: "There is now an acknowledgement of the fact that the struggle we will have in the manual workers' negotiations is everybody else's struggle too."

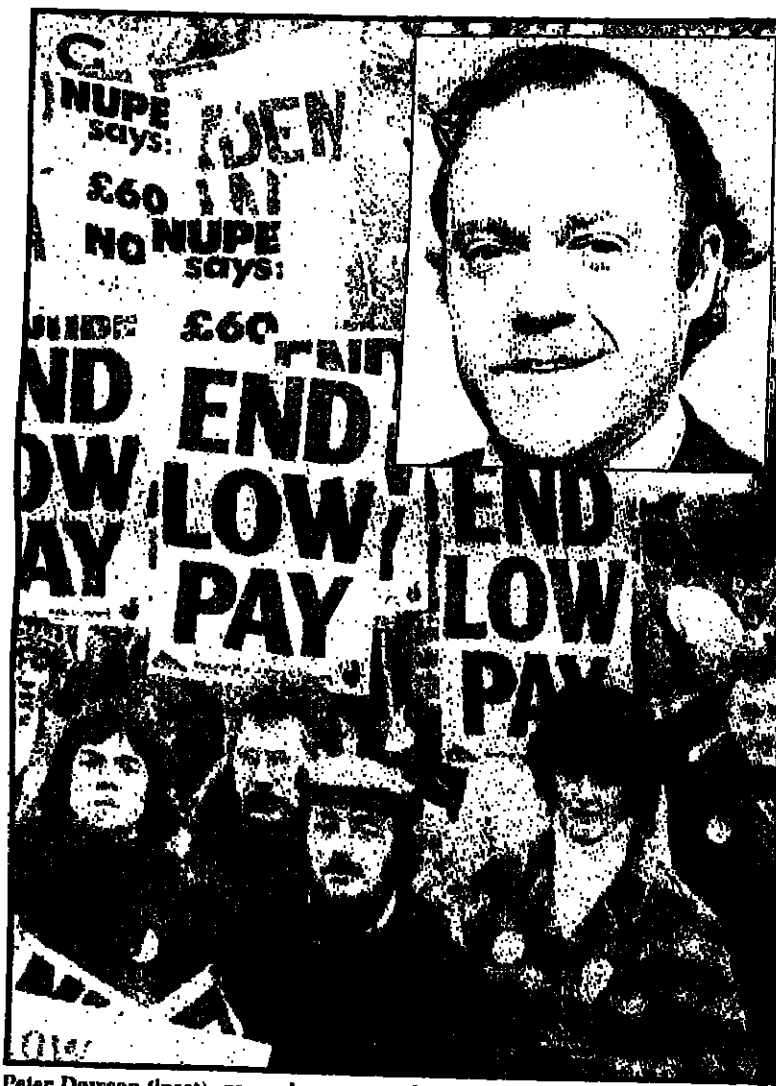
Lecturers in the past have not been noted for their unerring support of industrial action mounted by other campus unions. Isolated examples of doing work normally undertaken by other employees and - rarely - blatant crossing of picket lines have damaged their credibility with the other unions.

But this year both their leaders and leaders of the clerical and manual unions detect a changed attitude. The way in which the National Association of Teachers in Further and Higher Education has forthrightly condemned the 4 per cent cash limit and pledged its support for the TUC initiative means it is likely to be more responsive than it has in the past to appeals for support.

"People do realize that if we do not support the porters and other manual staff, by the time we get through to our turn in the pay round it will all be over," a member of the Nafhe executive said.

The role played by the manual workers last year has not gone unnoticed either. Mr Keating pointed out: "Last year the Government had intended a cash limit of 6 per cent but we were able to get the local authority employers to go beyond this. We settled for 7.5 per cent and this was the exact figure throughout the rest of the local government negotiating bodies."

The question for the lecturers, whose settlement date is April 1, is whether this breakthrough could be achieved this year. Mr Keating said: "No single group of staff in local



Peter Dawson (inset), general secretary of Nafhe will be supporting the Manual workers' pay struggle.

government, whoever they are, can successfully try to achieve their own objectives without being part of the overall collective."

Nafhe's condemnation of the new cash limit was unequivocal. Mr Peter Dawson, its general secretary, told the month's executive meeting: "We will be supporting other public sector unions and the TUC in taking a determined, united stand against the Government's discriminatory 4 per cent pay policy."

"Yet again the Government is trying to drive down the wages of public sector workers as a tool of financial restraint."

"This pay limit will do nothing to contribute to the economic recovery of the country and will seriously undermine the pay position of all our members."

He declared Nafhe's refusal to consider the cash limit when it draws up its 1982 claim, a clear echo of last year's commitment to ignore the 6 per cent cash limit and instead follow conference policy in drawing up a claim which was eventually for 15 per cent and a series of structural improvements.

With the 7.5 per cent settlement the structural questions were referred to a joint working party chaired by the independent chairman of the Burnham committees, Sir John Wordie.

The working party is still only part-way through its task, but this week management sources were expressing genuine disappointment that the cash limit would inhibit implementing urgently needed reforms.

"The management panel really believes there are some structural changes which are overdue and regret the fact there is not going to be much room to buy them out," an official said.

"Particularly at risk will be the aim of simplifying the way in which courses are organized into four different levels with a direct impact on the salaries of the lecturers involved."

These are strong arguments for having only two categories - advanced and non-advanced - rather than the present four. The management side in particular feels that lecturers with the toughest jobs - working in the education colleges and on Manpower Services Commission courses - are not necessarily paid in line with the demands of the job.

"The present Burnham system ensures there are fewer highly-paid lecturers in this area than in the task of teaching motivated undergraduates on polytechnic degree courses," the official said.

Even more threatened by the lack of

scope for manoeuvre is the management aim of increasing class contact hours for some of the more highly paid lecturers. But it recognizes that significant amounts of money will be needed to achieve this aim.

"Why should a senior lecturer with not a great deal of administrative work teach for only 17 hours rather than 21 or 22?" the official said. "But there is not a lot of cash around to provide the necessary sweeteners."

The teachers' panel on Burnham will have its own problems too. The cash limit leaves little room for the leadership to draw up a claim in line with this year's conference decision which called for a combination of a percentage and flat-rate increase.

The conference expressed its desire for a 2x-y per cent claim to balance the need for compressing differentials within the public sector with maintaining external relationships, especially with the universities.

But 4 per cent is bound to make establishing the relative sizes of the components of the claim near impossible. "Too small a flat rate component will undermine the determination of large numbers of lecturers in colleges to narrow differentials. Too small a percentage and the gap with university salaries will inevitably widen to the benefit of the Association of Polytechnic Teachers, still hovering on the sidelines in anticipation of a seat on the Burnham further education committee."

Nafhe's official line is that it will obviously be considering the question of establishing a common line for settlements. But it was being pointed out that the TUC initiative allowed unions to frame claims in accordance with their own conference decisions and particular circumstances.

The union still has its special council scheduled for February, but the timetable for decision-making is already under review and may well be changed substantially in view of the National Association of Teachers/National Association of Schoolmasters decision to lodge a claim in early December.

Next year for the first time university and college lecturers will share the same salary date. How far their claims and campaigns will intermesh has yet to be seen, and leaders of the Association of University Teachers are currently preoccupied with their own first

But April is seven months away and the real crunch which will make or break the new found identity of interests across traditional professional and industrial barriers is much closer.

Controls that avoid blood on the carpet

Ngaio Crequer talks to the chairman of Australia's Tertiary Education Commission

"I'd like to ban your paper from our country," the distinguished Australian professor said. "I'm worried the government might read what's happening over here and follow suit in two years time."

The remarks were delivered with good humour by Professor Peter Karmel, chairman of Australia's Tertiary Education Commission (TEC), who had stopped by on his way to the Organization of Economic Cooperation and Development meeting in Paris.

Whatever the Australian government does, it will not be surprising if British politicians and academics pondering the make-up of a national body for public sector higher education look more closely at the workings of the TEC.

The TEC was set up four years ago by act of parliament to bring together the three councils for the universities, colleges of advanced education (CAEs) and the technical and further education sector (TAFE).

The councils each have a chairman and eight part-time members - four academics or people directly involved in running institutions and four with knowledge of or connected to the sector. The commission is composed of the three councils and five part-time members appointed by ministers to represent the community.

The commission's role is to advise ministers on the financial requirements of institutions to enable a coordinated, balanced development. It seeks the advice of the councils but does not necessarily follow it. The minister, however, is obliged to table in parliament the advice given by TEC, and any advice it has received from the councils must also be appended to the recommendations TEC makes to the minister.

In February the TEC produced its triennial report, 300 pages including recommendations, plus another 750 pages, representing the advice of the councils.

June the Government responded by announcing the level of funds, and guidelines confirming an earlier statement that 30 colleges would have to be merged or the Government would not fund them.

The TEC allocated the global sum between the sectors and presented another report (a further 450 pages). The cabinet is expected to accept this advice, and make it policy.

According to Professor Karmel, the TEC usually applies an even-handed approach between the universities and the CAEs. "When we were set up the minister said the councils should be subjective and the commission objective. The councils are advocates for their sector. TEC should hold the balance."

The chairmen of the councils are important people on the TEC. A major switch of funding between the sectors would be difficult to achieve, and could only be done by a directive," says Professor Karmel.

"One major difference is that the CAEs are not funded for research. They are not allowed to do PhD work and do little master's work."

"The TEC would not want to get involved in detailed funding. We have the power legally to disapprove major new developments, things that potentially would involve a lot of money, say degrees in nursing or some such," says Professor Karmel.

"It would be impossible for any university of college to start a school of engineering or school of architecture without our concurrence. At the moment, too, we are trying to rationalize language offerings. But apart from that we would not get involved. We would not go as far as writing letters to universities."

"But we do promote developments. We have faculties of agriculture and forestry, for example, but no faculty of fisheries, and we believe there is a case

for husbanding these.

"The government sometimes makes initiatives. It is trying to develop migrant languages and has made special money available for this, and is trying to pick the universities to do it."

In its power to disapprove new course developments, Professor Karmel thinks that the existence of the TEC has brought the university and CAE sectors more into line. But conversely, because the TEC cements the distinctions between the sectors, demarcation lines are blurred. "The TEC has clearly indicated it believes that universities have a commitment to research and the colleges do not. The TEC would see the colleges as having a more vocational slant," he says.

Students are more likely to go to their local college or university which means that rationalization of provision is more difficult.

"We are conscious that in some states there might be two schools, or at a university and one at a polytechnic, and as money gets shorter we are beginning seriously to consider making a decision as to whether we could support both. When that happens we would have to get advice from the two schools. We would have the capacity to do it, but there would be blood on the carpet," Professor Karmel said.

On how a system might work in Britain Professor Karmel said: "If you had the chairman of the University



Professor Karmel: difficult decisions

Grants Committee, the chairman of model B and an independent chairman, and a few others you could make up your mind about whether duplication could be eliminated. But the question of deciding the relative qualities would be more difficult.

"When comparing university departments there are preconceived criteria such as the quality of staff, their reputation established by publication, whether they are attractive to students and so on."

"But a school in a polytechnic might have quite different objectives. You would ultimately be forced to judge them about to what extent you want both kinds of courses, or if money is short, that you want x and not y, because of excellence but because of national needs."

Professor Karmel said that when the system was expanding in the late 1960s and early 1970s, separate activities and teachers and into its modern phase providing vocational work and citizenship training for people living with twentieth-century technology.

It has entered the 1980s facing a crisis of confidence. After the haphazard expansion of the 1960s and the steady retrenchment of the 1970s, have come the austere eighties. Declining budgets, falling rolls and increasing graduate unemployment are some of the facts of the 1980s. The result has been a general air of pessimism.

There is a two-fold pressure on institutions to reform from governments, the paymasters, and from below from students, the consumers. Both want improved value for money, with government looking for more direct aid to the economy, and students looking for courses that promise secure lucrative careers.

This week in Paris senior government representatives from the 24 countries of the Organization for Economic Co-operation and Development have been meeting to discuss policies for the 1990s to cope with these and other problems.

The conference will focus on four key areas: access to higher education; the changing relationship between higher education and working life; new patterns for running higher education; and the financing of higher education.

Patricia Santinelli looks at teacher training in our polytechnics' series

Axed before they prove their worth

Teacher education in the polytechnics, only just emerging from its infancy, may have a stunted growth in the next few years as a result of public expenditure cuts and recent funding proposals.

Both will put courses at risk. But their impact will be hardest on the visible parts of the polytechnics and the poor recruiters among them.

Recommendations for a 25 per cent emergency cut in 1982 intakes to postgraduate courses by the Government's Advisory Committee on the Supply and Education of Teachers (ACSET) if agreed by the new Secretary of State for Education and Science, Sir Keith Joseph, will hit polytechnics and other public sector institutions hard. They conduct the majority of primary school for training, which is particularly earmarked for cutback.

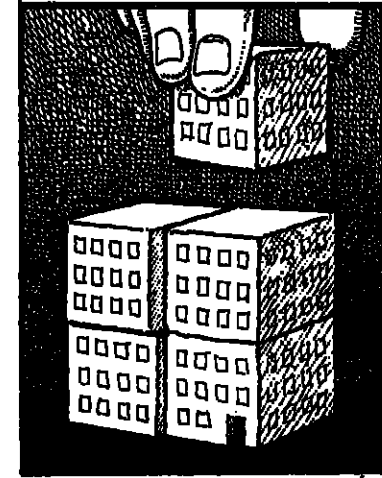
Before institutions can pause for breath they may also confront ACSET's other recommendation of a 10 per cent cut in all initial teacher training courses.

No discussion has yet taken place on how this might be operated, but polytechnics may find their new targets for the Bachelor of Education based on 1980 recruitment levels when the public sector achieved only 60 per cent of its total 9,500 target and polytechnics fared worse than the colleges. The 1981 recruitment shows a minor upsurge. ACSET calculations saw BED intakes help to some 4,500 annually.

The Committee of Directors of Polytechnics issued an unprecedented statement in May defending teacher training. It accepted that a further reappraisal of training was necessary but warned that rationalization should not be based on figures but on hard analysis.

In a graph outlining first-year enrolments to full-time and sandwich courses in teacher training at the polytechnics from 1975 to 1980-81, the committee showed that enrolments which rose to nearly 6,500 in 1976, dropped in 1977 - mainly the result of DES imposed quotas - levelled off and then declined so that by 1980, enrolments were only just above 4,000.

The CDP stressed that a further stringent cutback, so near what was acclaimed as the final solution in



education; more flexible courses; and greater resources and teaching to make teaching an all graduate profession. They also wanted manageable units which could respond quickly to changes in demand and the formation of joint courses.

Whether such principles have in fact been embodied in the 24 mergers that took place between 1973-1979 is not clear, since much of that period is best remembered for chaos, upheaval and DES secrecy.

Nevertheless the mergers gave an

almost new strong role to the polytechnics in teacher education. Only five polytechnics had some teacher training before that period. The largest now are Bristol, Brighton, Liverpool, Leeds, Manchester, Sheffield and Trent, all of which have an allocation of some 800-1,000 places.

Out of the 30 polytechnics only Coventry, Hatfield, Central London, City, Preston, Plymouth and Wales have no initial teacher training, but Hatfield does have in-service provision. All of the 24 polytechnics carry in-service training, except for Newcastle, and some 14 polytechnics offer PGCE courses.

Although some mergers such as Birmingham's were achieved with relative ease because of adequate consultation, many like Wolverhampton's, proved slow and painful. The main reasons were the difference of traditions between the colleges of education and the polytechnics.

Polytechnics had much stronger power bases than colleges of education, even though some of the new faculties of education started off larger than the traditional ones. Falling rolls for BEDs and new DES quotas, however, soon meant rapid contraction in size and provision.

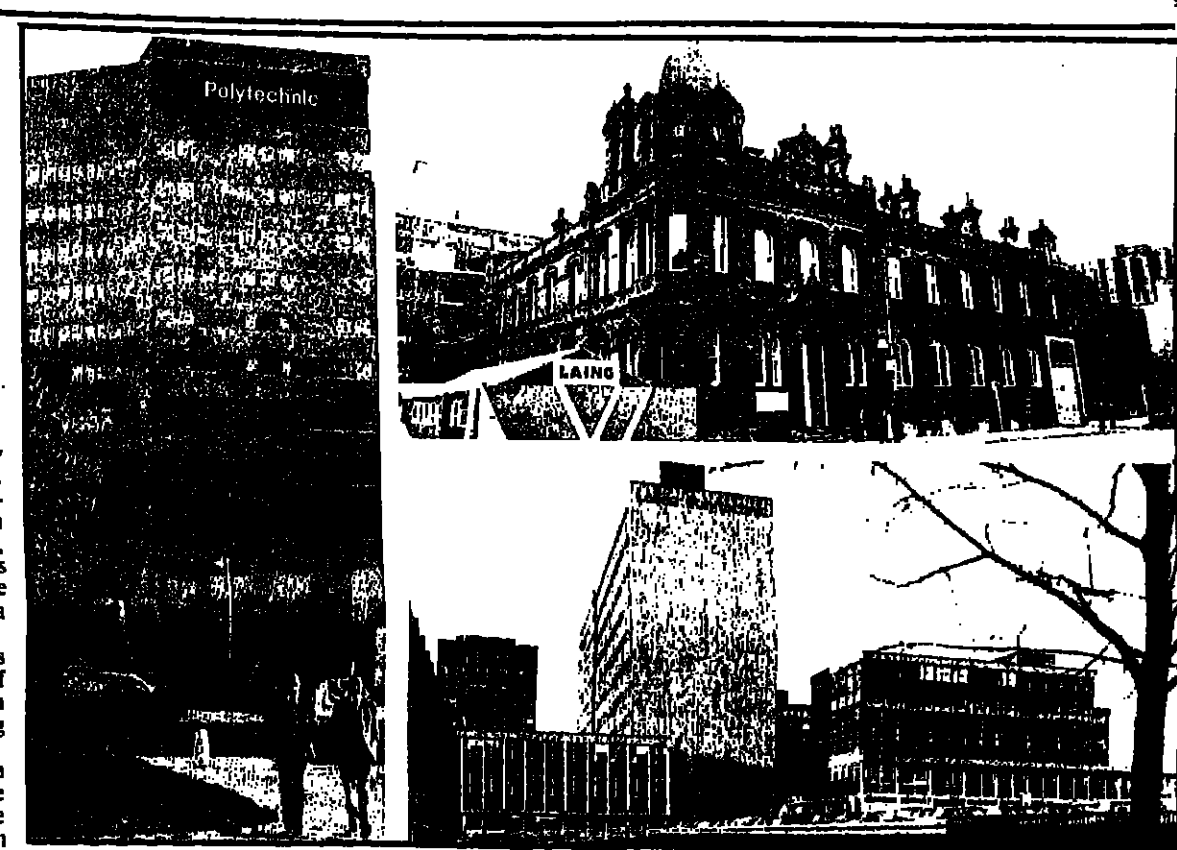
Manchester, Sunderland and Wolverhampton are three good examples of the different assimilation processes. At Manchester the polytechnic already had an education department and assimilation was slow.

At Sunderland, there was an immediate transfer of staff to departments in their own subject with the rest of the staff forming the faculty of education. At Wolverhampton there was a partial transference of staff to other departments and the regrouping of the remainder plus education studies staff into a faculty of education.

Greater resources include financial support, computing and equipment, student counselling and careers service, while significant economies have been achieved by the elimination of uneconomic groups. As a result shortage subjects have been protected despite recruitment difficulties.

There have, however, been difficulties and problems, some of which have not yet been resolved. A major one has been that responsibility for teaching has been spread across departments, creating possible problems of course administration, control and coherence and a lack of clear departmental identity for teacher training. As a result the position of teacher training in many institutions has been weakened.

But perhaps the real basis of many of the problems has been the lack of understanding on the part of the polytechnics of the unique nature of teacher training. As a consequence teacher education has too frequently been required to conform



Huddersfield (left), Manchester (top) and Leeds Polytechnic house former college of education courses.

mediate transfer of staff to departments in their own subject with the rest of the staff forming the faculty of education. At Wolverhampton there was a partial transference of staff to other departments and the regrouping of the remainder plus education studies staff into a faculty of education.

Different models for the BED are also indicative of varied types of assimilation. For example at Manchester, there is a separate degree with no overlap with academic degrees in rest of institution. At Wolverhampton and Trent there is a separate degree but common teaching with BAs or BScs. But at Oxford there is complete assimilation into academic degrees with a modular course which includes a BED route.

As a result of the mergers polytechnics have been able to carry a very broad age range of work from nursery to secondary with a variety of subjects available at both BED and PGCE levels. But there are also pockets of concentration such as in primary, shortage subjects, craft design, technology and home economics.

There are signs that the BED secondary route which ACSET was adamant should continue is being eroded, in spite of adequate resources. At least two institutions have had to drop their provision altogether because of poor recruitment due mainly to students preferring the PGCE route for secondary

school training. At Sheffield this has led to secondary training being contained to physical education, home economics, maths and science. Leeds has reduced provision to three or four subjects and Leicester has had to drop home economics.

The mergers have had a beneficial effect on the polytechnics with the acquisition of staff with expertise in teacher techniques.

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OECD nations are meeting in Paris to discuss higher education. Paul Flather reports

A crisis of confidence

Higher education has travelled a long way from the ivory towers of medieval times. Since then, adopting Professor A. H. Halsey's well known theory, European higher education has moved from the time when close elites searched for truth through the period of the industrial revolution when it expanded to provide training for doctors, lawyers, engineers and teachers and into its modern phase providing vocational work and citizenship training for people living with twentieth-century technology.

It has entered the 1980s facing a crisis of confidence. After the haphazard expansion of the 1960s and the steady retrenchment of the 1970s, have come the austere eighties. Declining budgets, falling rolls and increasing graduate unemployment are some of the facts of the 1980s. The result has been a general air of pessimism.

There is a two-fold pressure on institutions to reform from governments, the paymasters, and from below from students, the consumers. Both want improved value for money, with government looking for more direct aid to the economy, and students looking for courses that promise secure lucrative careers.

This week in Paris senior government representatives from the 24 countries of the Organization for Economic Co-operation and Development have been meeting to discuss policies for the 1990s to cope with these and other problems.

The conference will focus on four key areas: access to higher education; the changing relationship between higher education and working life; new patterns for running higher education; and the financing of higher education.

country there has been a decline in the traditional 18 to 24 year old age group because of demographic shifts and graduate unemployment and underemployment.

The result has been an increase in part-time and modular patterns of study and an increase in non-university study, the extension of new structures in higher education, for example the Open University in Britain, and a general aging of the student population. The OECD itself has identified four new groups of learners: mature students; young students adopting new patterns of attendance; students coming from vocational backgrounds at secondary level; and women.

The groups provide a series of problems: should adults join the existing institutions of higher education or should they have their own streams for study? Should the curriculum be adjusted away from the specific needs of young people? And how should adults contribute to the financing of higher education?

For women the problems centre not so much on the participation rate but on trying to move women out of traditional female areas of study such as teacher training and the arts. For vocational students, the problems are whether of access they should have and whether they should be encouraged to work before entering higher education.

The relations between employment and higher education forms a second theme for the conference. It is not easy to see which side is

to blame. Have universities been producing unemployable graduates or has there simply been excess production of skilled labour in relation to the economy's needs.

The question of who governs higher education varies greatly from country to country. In many European countries the chairholders, the professors, hold enormous sway over all academic matters; in America laymen or trustees have considerable influence; in Britain the buffer institution between Government and colleges and universities has a crucial role; while in Yugoslavia there is a unique system based on the self-management principle.

The question is who should govern and who will be best suited to produce the reforms needed to deal with the challenge of the 1980s: the politicians and bureaucrats; the academics; or strong independent bodies. Then there is the question of whether higher education should be centralized or decentralized, and how the university and expanding non-university sector should be linked.

The final theme is finance. Rising costs are critical but the roots of the financial difficulties stem from the general recession and the loss of education's prestige on the list of social objectives. The OECD conference will try and review cost structures and discuss alternative sources of finance.

The mood is not all pessimism. As Philip Coombs writes in his report, after the rapid expansion of the 1960s and early 1970s higher education institutions can now turn their attention to scraping off the useless old barnacles from the distant past. "This is not just a good thing, it is essential."

One problem facing educators is how to cope with what the OECD describes as "new groups of learners". In almost every OECD

country there has been a decline in the traditional 18 to 24 year old age group because of demographic shifts and graduate unemployment and underemployment.

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Lessons of job queues cool Italy's campus frenzy

Once Italy's open universities were seen as academic Utopias. Today they are commonly known as "parking lots for the unemployed".

Worried educators, who until recently lamented chronic campus congestion, are now lamenting another malady known as "campus haemorrhages". Somehow over the last two years, about 300,000 students have fled the *Aulas*, most of them forever. Much has changed in the 12 years since the 1968 student revolts backed by burgeoning left-wing parties forced sweeping reforms that included opening the campuses to anyone with a secondary education, joint student-professor curriculum planning, easy exams, token tuition fees and liberal state stipends.

But the campuses, scenes of vitriolic political debates for a decade, are calm today. The faculties — so politicized that some were temporarily closed — have functioned normally for the last year and the student mobs which rampaged through the cities seem to have dissolved mysteriously. Today's Italian campuses are no longer known as hatcheries for terrorists.

The experts attribute "the return to study" to a combination of reasons: disillusion with the once-popular Communist Party, the excesses of the terrorists (no longer considered the Robin Hoods of the poor) and more operational campuses due to the decline in students.

Just how meek campus life at Italy's mass universities had turned was illustrated this summer when the government quietly sneaked through a decree to increase university fees according to family income scale, a so-called "parking lot" fee.

Under the decree, students whose family income does not exceed £8,000 will have to pay an additional £23 a year in campus fees. For the upper income bracket the added fee can reach a maximum of £175. This fee is added to the already existing £10 enrolment fee and £30 tuition fee. Although fees have gone up, government stipends have remained at £120 a year for resident students and £250 for out-of-town students.

The additional fee was immediately criticized as a government plot to further deplete campuses whose attendance figures had quadrupled in the turbulent 1970s to reach almost two million students, but are now levelling off at 1.3 million. The decline is mainly due to mid-course desertions and a drop in the enrolment rate of A level students from a record 87 per cent in 1972/3 to 73.1 per cent for the last academic year.

Statisticians staunchly believe that the drop in enrolments is mainly due to the sad reality that the hordes of graduates (72,000 only this year) which the mass university has churned out have fallen on a labour market unable to absorb them.

"We have come to the end of a cycle in which it was thought that education would guarantee an income for everyone," Professor Giuseppe de Rita, an education research fellow, says. "Today in Italy those who make real money are the shopkeepers with five years of primary school education," another academic was quoted as saying.

In a society where (despite fierce politics) degrees and education are inseparably linked to material values, the idea of the mass university and campus Utopia was doomed when confronted by the prospect of unemployment.

Ironically tens of thousands of the same students and graduates who saw in degrees a promotion on the social ladder and gilded job securities are today competing for manual labour jobs for which their fathers qualified with primary school level certificates. Worse, when they apply for these jobs they often consider it wise to deny their academic

background. When Rome's public transport company (ATAC) advertised 192 manual labour jobs in May this year 14,000 candidates applied, many of them university students or graduates.

To avoid favouring the "intellectuals" the 2,000 survivors of a basic primary school test were subjected to a week of roadwork. The candidates had to pick up three square yards of bitumen, dig up old tramlines, and carry heavy loads. The test played havoc with student applicants.

At southern Bari the local savings bank advertised jobs for 150 white-collar employees. Fifteen thousand applied. The bank admitted that half of the 1,100 survivors of an initial selection test turned out to be graduates.

When Italy's state railways held an aptitude test for 30 aspiring station attendants, the test theme chosen for the 3,200 candidates was "the Renaissance". What use a future stationmaster can make of his knowledge of the Renaissance was never made clear by the railways.

"In general, however, no employer wants graduates for jobs that are below their academic qualifications," Professor Federico Olivares says, "because they are afraid such a person will be frustrated in his job and find an outlet for his frustration in trade union activity."

"When I first applied for a job I made the mistake of telling them I was a student," admits Carlo, a 19-year-old Rome student now working as a storeman. "Next time I was smarter and I got this job."

At the Bari steelworks of Italcristal a survey discovered that 18.7 per cent of the clerical staff were not just university graduates, but held doctorates.

Antonio Cobalti, sociology professor at Trieste, complains that in Italy there is an anti-industrial academic mentality which defies central planning. He argues that the only salvation for the mass universities is an academic system programmed to the needs of industry.

In further touch of irony the "campus haemorrhage" has mainly hit that sector of society which the idealists of 1968 intended to help — the students from the lower middle and working class. Forced by economic pressure at home they had to give up their quest for an "unprofitable" degree to find jobs.

In fact, Professor Cobalti argues that the "parking lot" campus situation, coupled with low standards of mass university graduates, is beginning to restore the old elitist system toppled by the student revolts. Students from the privileged class and private universities and polish off their education with courses abroad. As a result they are first in line, by merit of their degree, for the few openings in their field, so reestablishing their privileged position.

The blame for the failure of the mass universities also rests heavily on successive Italian governments which failed to reform a higher education system rapidly outgrowing its antiquated infrastructure. The rush to the campus caused such congestion that 30 professors in some faculties taught up to 12,000 students at the height of the boom. Most students graduated without once talking to their professors. Worse, not one additional university has been built since 1969 and mini-reforms to add new staff were enforced only last year — too late.

Still, in an abstract way, graduate unemployment and campus congestion have caused some positive reactions. A survey this month showed that students now aim for smaller faculties or rural universities where professor-student rapport is still possible. Better still, Italian students are again highly motivated.

"There is more motivation, more desire to study now. A marginal pass is almost an offence today," an anthropology lecturer adds. "This is a far cry from the explosive campus climate of only a few years ago when militant student mobs forced their professors under threat of maiming and beating to give them what was commonly known as 'political passes'."

In the end the carrot of remuneration proved stronger than the rule of political enlightenment under the guise of education.

Uli Schmetzer

WORLDWIDE

Higher education after the cultural revolution: Jane Marshall reports



Peking students and pragmatic chairman Deng Xiaoping: turning the clock back for the sake of the future.

China picks up the pieces

As the first batch of university graduates emerges since the cultural revolution, the Chinese government is occupied with introducing wide-ranging reforms to higher education, with the emphasis on quality to serve the country's needs.

The authorities face the formidable task of replacing the narrow, rigid system of higher education copied from the Soviet Union during the 1950s: restoring some kind of academic standards after the chaos of the cultural revolution; and gearing higher education to turn out specialists for building China's future.

There are about a million higher education students in China — about 1 per cent of the college age population — which the government recognizes is far too low if the country's economy is to progress in the foreseeable future. As well as increasing the number of universities and other institutions (it has just opened 26, bringing the total to 701) it is also considering ways of diversifying higher education — for instance through community colleges and by raising the number of part-time students. It is encouraging students to study on their own or to take extension courses and to make full use of radio, television and other electronic aids.

After the Communist takeover in 1949, the government switched from the comprehensive, inter-disciplinary university system largely influenced by the United States, to the Soviet system of narrow specialization with separate departments for engineering, medicine, finance and so on. Teaching and research were separated; science and engineering, though both heavily emphasized, were split.

The government which took over in 1977, masterminded by Mr Deng Xiaoping, the pragmatic Vice-Chairman, decided to revert to a system more on pre-1949 lines, and looked to the West — especially the United States — for the model. But progress is slow. Mergers of institutions take place only on a trial basis, and even cooperation between neighbouring institutions conflicts with the isolated nature of the Chinese work units. There is still little contact between faculties — or with the outside world.

The Soviet legacy restricts all university life to the campus. Even shops are provided on site, making it unnecessary for students or teachers to venture outside. The insularity is reinforced by each university's own of teaching and administrative jobs. However, some changes are apparent. One is the introduction of a credit system in some universities.

Peking is adopting it this term, and three other universities which used it before 1949 — Nanjing, Wuhan and Fudan — began up to three years ago. Instead of the 100 per cent compulsory course, students can choose about 30 per cent of their syllabus.

Unfortunately, because the credit system has been superficially grafted on to the old regime, rather than replacing it, in practice options are restricted to those available only to students from the department which offers them. And although a student can theoretically graduate as soon as he or she has accumulated the necessary credits, in fact graduation still takes four years. To do otherwise would upset the predetermined job assignment plan.

The 1966-76 cultural revolution turned the whole Chinese educational system upside down — and the higher the level, the more it was disrupted. The aim was to produce equality, between intellectuals and workers, the towns and the countryside. Students and teachers were sent into factories and the rural areas for manual labour; university courses were cut from five years to three, and consisted largely of ideology and politics. Degrees were abolished. It is said a million college students were "lost" — and only this summer have the first fully post-cultural revolution students graduated.

The government which took over in 1977 immediately set about reconstructing an elitist educational system and attempting to match it with the needs of the country's future. It reintroduced "key" schools and universities from primary level up — those which take the brightest students, and are allocated the best teachers and more money than the rest. China has about 100 key universities.

Academic degrees have been restored this year, for the first time not only since the cultural revolution, when the concept was abolished, but strictly speaking since 1949. Plans for degree systems were made after 1949, but were never fully implemented.

College entrance examinations have been reestablished; and not surprisingly the authorities have judged university entrants to be of higher quality than those who entered under the "recommendation" system of the cultural revolution, when a student's family background and attitude to ideology were more important than academic ability.

Education for the future means training specialists to develop China's four modernizations — agriculture, industry, defence, and science and technology. China needs tens of millions of specialists, but turns out

only 200,000 a year.

The government intends to change the present heavy bias towards engineering and science — more than 60 per cent of Chinese undergraduates are in one or the other — recognizing the need for more emphasis on the liberal arts to improve management in all sectors.

In spite of enthusiastic reports of government plans and successes in reforming higher education, there is still apparently some way to go before all its consumers will be satisfied. Students writing on college reform in *China Youth News* last year complained of over-emphasis on specialization; they wanted more contact with the world outside; they said professors should concentrate more on teaching and less on their own research. Perhaps most important, they condemned the tendency to teach which made them "passive recipients" of knowledge, rather than trained them to analyse problems and think for themselves.

A number of undergraduate anonymous third-year students at a Chinese provincial liberal arts college have made the point more forcefully in an article published in the *New York Review*. They described their bitter disappointment in their college education, in which political indoctrination was rife; only a small percentage of classes were of any use, with most time being spent "memorizing dogma and the teacher's words". Philosophy studied Marxism only; art theory studied simply: "The purpose of art is to serve the politics of the proletariat".

Jargon cloaked teachers' real opinions; there was no independent thinking or free discussion, no extracurricular life. Even activities related to work required party approval. Examinations consisted solely of regurgitating memorized "inspired course material".

Their despair, said the students, lay in the fact that even after the "second liberation" (from the cultural revolution) their educational system was still as bad as it was — with its heavy dose of feudalistic ideas and authoritarianism (it could not possibly develop their generation's talent effectively).

But perhaps all is not so bleak. There are signs that at least in some courses students have more freedom and teaching matter is more comprehensive. A student at Peking Institute reports open discussion, instruction on Plato and other philosophers as well as Marx, and a vast difference from three or four years ago.

THE FIRST TEN YEARS

Ten years ago this week *The Times Higher Education Supplement* was published for the first time. In celebration of this anniversary the following five pages contains articles that look back over the last ten years and forward to higher education's future, at once hopeful and uncertain.

Below Professor A H Halsey discusses the fortunes of higher education since 1971 against the backdrop of British society, in particular shifting attitudes to education, leisure, and unemployment.

On the following three pages 13 prominent actors on the higher education stage contribute to a symposium on what went right — and what went wrong during the past decade, and speculate about the future.

Finally on page 15 Tom Balstow, formerly of the *New Statesman* and the *News Chronicle*, looks at *The THES* itself.

Will decay follow the last decade?

The THES was an infant when I reminded its readers of Adam Smith's remark that the word "scholar" had been synonymous with "beggar" in the medieval origins of the European university. I did so because in the two decades before *THES* was launched in 1971, the perceived relationship between scholarship and society had been virtually reversed. It became received opinion that society needed scholars and scientists to be productively and efficiently modern.

So it was out of conviction of its usefulness that higher education was justified in the 1950s and 1960s. The arguments, true or false, persuaded politicians and constituents that the policy must be expansion. The number of full-time and sandwich course students in higher education in Great Britain rose from 463,800 at the beginning, to 516,300 at the end, of the 1970s.

Expansion in turn justified *The THES*. The 1968 events notwithstanding, 1971 still belonged to the decades of rising expectations. Progressive opinion held that the rise of the graduate to the rise of the party. Educational evolution was destined to pass by stages from elite through mass to universal higher education. Down the ages exemption from exacting, life-long labour had been the privilege of minorities, exploiting the gullibility, weakness, or subservience of the majority. But now, by continued expansion of education, the higher literacy and literacy of advanced society was to be democratized.

Elevated strata, of course, had more or less rigorous regimes of prolonged education and training for their stations. These traditions, where they were priestly or military, were those of education as an investment. Only in the case of aristocratic and bourgeois strata was higher education in any serious sense a consumption good. But now, in the early 1970s it was increasingly possible to think of educational investment as necessary human social capital for the modern society, appropriately undertaken by the state. And at the same time a wide social distribution of education as a consumption would be seen as an appropriate and desirable consequence. Investment education was to be distributed by merit, consumption education by democratic right.

Not until late into the decade with Fred Hirsch's seminal, *Social Limits to Growth*, did education, expanded and democratized, come to be seen as a positional good, preying on scarcity and frustrating desire. Expansion, it became clear, does not automatically admit everyone to the educational franchise. So long as jobs are allocated competitively according to certificates issued by educational authorities, scarcity must remain. Education accordingly remains a competitive struggle for positions in the queue for more desirable jobs. Social determinants of educational attainment along with the politics of education which is increasingly focused on the higher stages of schools and colleges.

Putting all this less portentously, it could be seen in the early 1970s that the future, at least offered a secure social base for "quality" newspapers. Brian McArthur moved from

The Times to become the first *THES* editor, making the confident assumption that Robbins had underwritten a third Supplement; and he was right. Circulation viability was assessed in those days at 20,000. Even if the readership was to be confined to dons, there were already 30,000 of them, compared with 2,000 at the beginning of the century, and the numbers were planned to rise beyond 50,000 before *The THES* would celebrate its tenth anniversary.

Expansion, moreover, not only guaranteed the readers, but also ensured the copy. Even the student troubles and American doubts about the graduate market, which might have given pause, were also sources of news. In any case there were virtually inexhaustible questions about higher education, so recently an obscure *rite de passage* in the late adolescence of tiny and irrelevant, if privileged, minorities.

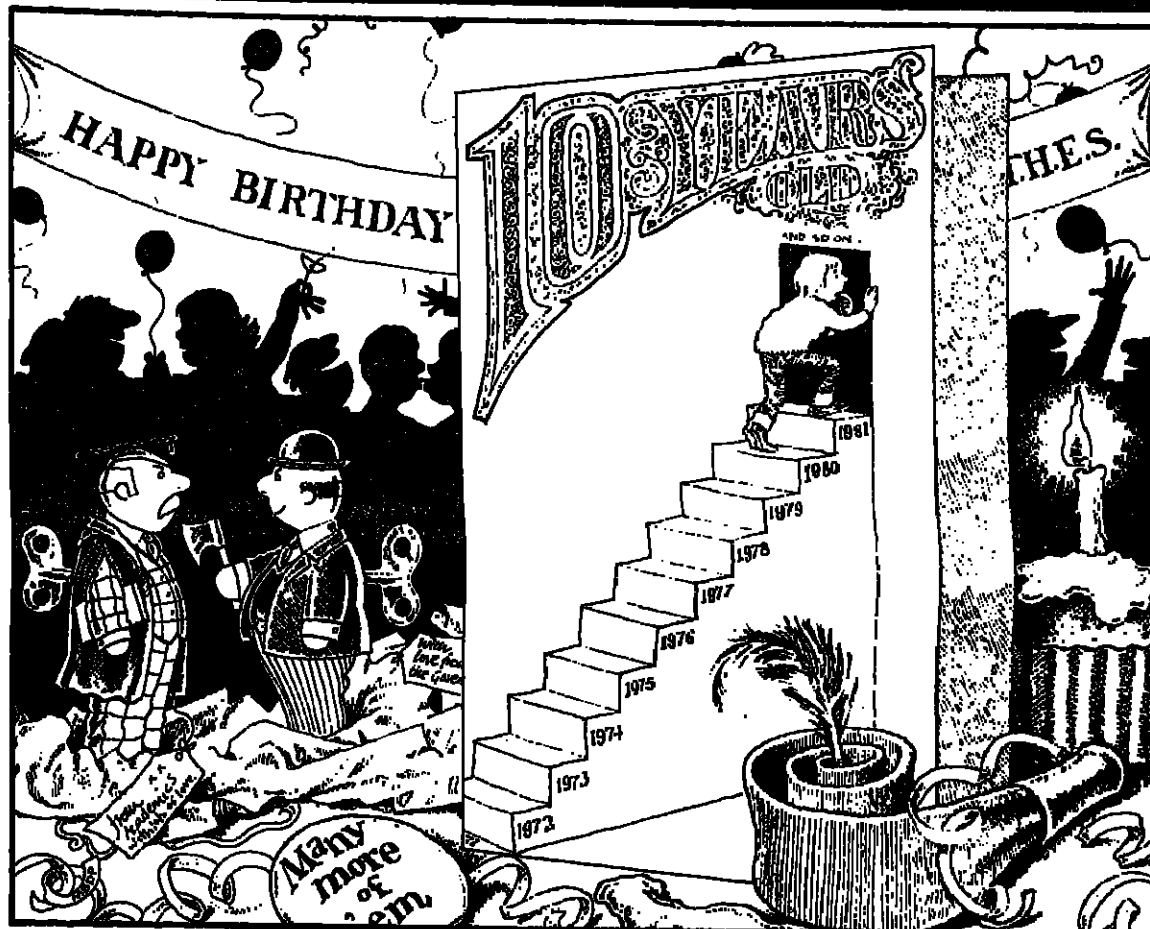
What, where, how, and to whom a vastly elaborated higher education was to be given were no larger and absorbing new questions. They came out of a society which was developing serious unease about the serviceability of its established institutions — economic, political, and educational — for a future without the old external assurances of empire and economic superiority, or the internal solidarity of a United Kingdom.

The THES inaugurated a weekly rehearsal of the education answer. Looking back over the decade they seem to add up to something like 500 lessons in disillusion: and the first of these is expansion itself. On September 12 1980 the House of Commons ordered to be printed a graph which told the story of successive reductions in anticipated student numbers from their high point (835,000 by 1981/82) in 1970 to the target (since further reduced) of 560,000 by 1982/83, which was accepted in 1979.

In the preceding decade of the 1960s the age participation rate had doubled from 7 per cent to 14 per cent; but in the 1970s it fell back to 13.4 per cent in 1975-76 and 12.5 per cent in 1980-81. Moreover, this waning attractiveness of education beyond school after the waxing hope and resolve of the later 1960s bodes ill for the 1980s given the reduced birth rates of the post-*Robbins* period, and the advent of the Thatcher/Boyson doctrine of strength through starvation. Here, then, is perhaps the major disillusion of the 1970s: the demolition of the fond belief that universities and colleges had assured, and for practical purposes unending, growth.

Of course, it may reasonably be said, this encounter with reality for the dons only mirrors the experience of the nation. The GNP followed a similar course. Shirley Williams has referred to 1975 as "the end of the generation of prosperity". Between 1950 and 1975 Britain had a quarter of a century of steadily rising prosperity during which the GNP per capita almost doubled.

But, as with student numbers, the real income of ordinary people then began to slide back, so that by 1981 they were little, if at all, better off than they had been in 1971. A long previous history of steady growth, admittedly slower than in some other countries, and conspicuously so by comparison with Japan, West Germany, and Scandinavia, had made each generation feel wealthier than its parents and expectant of a still



better future for its children. Then came OPEC, and the assumption of continuous amelioration was shattered.

Shattered is perhaps too violent a verb, for both British higher education and British middle-class society were cushioned, materially and psychologically, by an earlier start, the legacy of imperial spoils and established standards of educational living in Oxford and Cambridge as well as York and Sussex, which were the envy of the scholarly world. Moreover, we still had North Sea Oil and the 1:8 staff-student ratio.

Nevertheless, rumours of recession, economic and academic, mounted from the middle of the decade, and became harsh reality by the end of it. In 1973 fewer than half a million were without jobs. By 1977 the unemployment rate was 6 per cent, giving a total of 1.4 million people in

the dole queues, and on *The THES*'s tenth anniversary the prospect is three million, with redundancy entering even the senior common room.

The nature and significance of idleness, I would suggest, is the key to interpreting the whole decade both for British society and the colleges. It has two closely related, but not synonymous, alternatives, leisure and unemployment. The point of economic growth is to achieve leisure, to avoid unemployment, and to profit from a special past form of idleness, that which was praised by Bertrand Russell, the release of scientists and scholars from mindless toil so that they might invent more powerful modes of human command over nature — material, aesthetic, and moral.

Higher education, on this view, is a justified form of idleness without stigma. It is, so to say, the use of idleness to beget idleness, but the former is constructive research creativity, and the latter is the leisure of a consequently more civilized society: neither involves unemployment, except as failure.

Yet the 1970s in Britain saw a dramatic shift in our appreciation of idleness. On one view we repudiated the reward of past labour and past research which is economic growth taken out in increased leisure. On another view we entered a more consciously dangerous phase of the British disease which is idleness in the form of overmanning, the perpetual tea break, sleeping bags on the night shift, etc.

The parallel in the academy is clear. Both scientific productivity and literary inventiveness necessitate leisure (the 1:8 ratio again, the subliminal, long vacation, "dons don't keep hours"), and the whole point of it all is to increase human productivity for more leisure for more civilized use. Again unemployment

means failure. Now from the mid 1970s, earlier in America and later in Britain with decisive action under the 1979 Conservative administration, there have come strident challenges to the justification of higher education. It was fixation of hope. We were adding more students in the quinquennium of the early 1970s than the total attending universities before the war, and £9 of every £10 was being provided directly by the state.

Academics had persuaded politicians, employers, and philanthropists that their wares were a paying investment for the nation as well as for individuals. Education was reckoned to yield a higher rate of return than factories or machines. It was, moreover, claimed to be the source of still higher rates of return in the future because the higher learning produced technological advance. These arguments justified Imperial College. Parallel ones claimed that professors could guide politicians to good government. Keynesian macro-economic demand management could be supplied to Westminster and Whitehall from Cambridge, and administrative intelligence could be recruited from the Oxford School of Modern History.

These claims now received increasingly sceptical scrutiny as the bill for buildings, salaries, and student grants mounted, and finally came under direct attack especially on the flank of the social sciences. Arguments from utility had almost entirely displaced arguments from idleness. But a monetarist, market orientated government, determined to reduce public expenditure, was unresponsive to both kinds of arguments so that, for the first time, at

least in living memory, the real resources of higher education fell.

What is perhaps especially remarkable about this end to the first *THES* decade is its illustration that "the revolution of rising expectations" is not the irresistible force which it has commonly been supposed to be in the 1960s. Not only could utility arguments be questioned, and the Robbins principles shown to be by no means inviolable, but the attractiveness of higher education itself (as manifested in the demand for places from qualified secondary school leavers) could decline.

Somehow British society, by 1981, could find itself tolerating mass involuntary idleness on the scale of the 1930s, despite the continuation of social inequalities of access to universities and colleges which the 1944 Act and Robbins had been invented to eliminate. The last relevant statistics of the decade reported in *The THES* told us that only 6 per cent of state school leavers went on to higher education compared with 29 per cent from independent schools, and 40 per cent from direct grant schools.

Unhappily, then, the 1970s have seen little progress towards that democratization of leisure which a modern system of higher or continuing education should represent. Instead the end of the decade saw governments, whether of the left or of the right, groping for solutions to the external check to economic growth, while the minority of the educated began to be more sophisticated about the nature of education as a positional rather than an investment or a consumption good. And the majority remains in bewildered ignorance the *THES* has a tenth, or any other, anniversary.

HIGHER EDUCATION FOR THE FUTURE

Charles Carter

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1971-81

To celebrate *The THES's* tenth birthday we invited some distinguished practitioners of, and commentators on, higher education to give their personal views on what went right - and what went wrong, on the past - and on the future in the following symposium

University case gone by default



Max Beloff

In 1971, the possibility of creating an institution of higher education outside the State system was still only a subject for discussion; ten years later, the University College at Buckingham is in process of applying for a royal charter. An act of creativity widely believed to be impossible and bitterly contested in some quarters has actually been shown to be within reach.

I put this first among the developments of the past decade, not just because it is the one with which I was most closely associated, but also because it is good to begin on a positive note. In other respects, nationally and internationally, it has been a trying time. By 1971, it is true that the waves of student revolt had largely subsided and peace restored to the campuses. George Kenman's despairing cry that the modern liberal university was a dying institution, and that scholars must find modern equivalents of the monasteries of the Dark Ages in which to carry a new Renaissance does not carry the same conviction. Yet the upheaval of the 1960s has left permanent consequences including a degree of politicization of the universities with which we have not yet fully learned to cope.

More recent threats to higher education in various countries and not least in this one are largely a result of the over-enthusiastic claims which by 1971 was beginning to fall off. In a starker economic climate more is asked for in the way of practical returns and institutions of higher education have not learned how to make such returns without sacrificing their primary aims of expanding and transmitting knowledge. Britain with its plethora of universities and polytechnics with ill-defined and overlapping responsibilities and no over-all responsibility in any quarter for the total commitment of resources, provides a particularly disturbing spectacle.

Britain has also been affected and is likely to go on being affected by the ravages of egalitarianism. For higher education is of necessity more appropriate for some students than

others, and the question is what criterion of choice to adopt. In the United States, positive discrimination - referred to in the bowdlerised version - as "affirmative action" - has been exercised in favour of blacks and women.

In Britain there is the inevitable impact of the class-stereotypes of left-wing politics. The intellectually competitive position of applicants from the maintained sector has been diminished by the abolition of direct grant and maintained grammar school. It is now suggested by the TUC that this can be remedied by imposing quotas on products of other forms of education. Products of independent schools are to be treated like Jews in Tsarist Russia. That this means using financial power to force the universities to abandon one of their essential freedoms - to choose students by merit - is an indication of how alien the spirit of higher education is from much of what passes as social thought today.

But even without this looming threat for the future, the handling of the overseas students question and of the more recent cuts have served to demonstrate beyond question that the system of university finance and administration to which the higher educational establishment has clung tenaciously for so long simply leaves the basic decisions to external authority.

Unfortunately the universities have not in the last decade thrown up leaders of a calibre to make possible serious dialogue with government; their case has largely gone by default. As for university teachers at large, the position of the AUT is warning enough. Having decided to affiliate with the TUC at the price of losing many members of long-standing such as the present writer, it now complains that the TUC has produced the proposals for handling university entries in a discriminatory fashion without even consulting it. It is hardly likely that the TUC would have produced a plan for the railways without consulting the NUR and ASLEF, but then Mr Sid Weighell and Mr Ray Buckton are serious people.

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Lord Beloff was first principal of the University College at Buckingham.

Doing more with less in the 1980s



Charles Carter

The first thing for the higher education industry to recognize, as it faces the 1980s and 1990s, is that its market strategy has failed. The arguments about the national need for more, better, and more expensive higher education, which some convincing and even inspiring in the common room, have achieved only a sour and negative response from the politicians, the civil servants, and the general public.

To put things right, there is need

for a new approach. First Britain is (by her own fault) a relatively poor country, with many social needs which are as important, or more important, than the maintenance of the present level of higher education. Therefore there is need for ingenuity in doing more with less resources; no one will be convinced by a claim that the productivity of higher education is incapable of increase.

Second, the profession needs more humility and insight in making its case. The experience of life and of work provides an educational influence just as powerful, and potentially beneficial, as any university or college. Higher education is not in a monopoly position, but merely a contributor - and perhaps a minority contributor - to the development of the minds and abilities of those who pass through its hands. It follows that higher education needs to check its professional pride, and be seen to listen to the ideas of other potential contributors.

Third, the public will have no sympathy with assertions of a right to special privilege, for instance in the form of exceptional security of tenure or of complete freedom to decide the pace of work. There are many hard workers in higher education; but there are also many - particularly, I fear, in the public sector - whose lengthy vacations are regarded as holidays, and who regard research as something only to be contemplated if teaching obligations can be further reduced.

Fourth, the profession needs to realize that, through ignorance and insensitivity, it has reacted too late to events. No stridency of protest about "cuts" will achieve as much as could have been achieved by seeing trouble on the way, and getting in first with positive proposals for dealing with it. (It was, for instance, mere folly to let the Government get in first on the overseas student problem). There are perhaps lessons here for the way higher education is managed, or represented at national level. A failed strategy suggests incompetent management.

Sir Charles Carter was vice-chancellor of the University of Lancaster until 1979, and is now chairman of the research and management committee of the Policy Studies Institute.

Long process needs long range planning



Fred Dainton

When *The THES* began all the technological advances and the new universities had been established and their capital development was well under way; the old and new civic universities, which had played the major role in the post-war expansion of student numbers, were still growing; the dual support system was working well, benefiting especially from the new equipment grant scheme of the UGC; staff were still being recruited and the concomitant advertisement revenue for newspapers was buoyant.

The new Government was economically expansionist, seeking "a dash for growth", and the then Secretary of State for Education and Science,

Mrs Margaret Thatcher, was preparing her White Paper *Education, A Framework for Expansion* specifying as one objective an age participation rate of 22 per cent, ie, 50 per cent greater than what it now is.

But the warning signs were there, in Britain's declining economic performance relative to her competitors; in citizens growing disillusion with the absurd and unconstructive manifestations of student unrest; in the decrease in the growth rate of the science vote which meant that some cherished objectives like a solely British High Flux Beam Reactor became unattainable; in the concurrent concern with public investment of science which did not appear to produce the desired economic growth and was perhaps mis-directed. Most worrying of all to me, was the "swing away from science" in quantity and within that another swing away from the physical sciences within our schools, which began about 1960, was unabated in the 1960s and was a clear portent of future troubles.

In the next decade these chickens came home to roost. In 1972 there was the Government's White Paper on research and development which brought some improvements but some disadvantages to the research councils and universities and one of these decisions, the transfer of funds from the MRC to the DfSS, because of its unproductiveness, has recently been reversed. The age participation rate did not rise as expected and this, coupled with the swing of student choice already referred to, led inevitably to some distortions and inequities, eg, although the acceptance rate of applicants was higher and the required minimum A level grades for admission lower in science and engineering than other faculties there were still many "vacant places" in these subjects in universities and consequently the polytechnics and some technological universities maintained their numbers by an excessive growth of social sciences including law (we all remember the absurdity that the philosophy department next in size to Oxford was to be found in a polytechnic) and overseas students helped to fill the vacuum to the extent that about one-third of the post-graduate population in universities came from this source. Without this influx the engineering research output of universities would have declined by more than 50 per cent.

So when the "dash for growth" was accompanied by sharply rising inflation higher education was especially vulnerable to the public expenditure cuts which followed. On the 1st October 1973 came the moratorium on university building, a little later the removal from the recurrent grant of the 50 per cent inflationary protection, the much valued and vitally important equipment grant was cut, quinquennial financing and planning gave way to belated annual financing and in 1974/5 the UGC had to bid (successfully) for supplementary grants simply to keep parts of the system from bankruptcy. Though the UGC did maintain its medical programme at full strength the unit of resource declined in subsequent years and this put great strain on the dual support system.

To increase revenue the Government raised overseas student fees despite the fact that nowadays trade follows the student and not the flag and that this act gives comfort only to our enemies and rivals. Inevitably the UGC intensified its *dirigiste* role first in libraries, then in slavic studies and very much more widely in 1978. In order to ensure more cost-effective use of public money and as a prelude to the certain large decline in the 18 year old population between 1983 and 1995. It argued successfully for a planning horizon of years rather than months and by 1978 the system seemed to be coming back on course again; but we know the recent history.

On this meagre historical evidence - and I could cite very many examples - it has been a tumultuous decade, a far cry from the 1960s. What of the next decade? I have no doubt that knowledge is still the engine of progress. Indeed, it is essential for our survival. Higher education has a vital role in this but for success it needs to be planned at the national level and I welcome the steps to

bring the polytechnics into this process. However, for their part, the polytechnics must recognize that higher education is a long process and therefore requires a correspondingly long planning horizon and, equally, ridding themselves of some of their structural and curricular rigidities, become more able to recruit able young staff and to identify and select those processes by continuing its practice of providing a forum for informed comment and debate and I wish it well.

Sir Frederick Dainton was chairman of the University Grants Committee from 1974 to 1979 and formerly vice-chancellor of the University of Nottingham.

Seeking a middle poly way



Norman Lindop

Ten years ago those of us in the polytechnics who were advocating some kind of national body to coordinate public sector higher education were met by Toby Weaver's firm defence of what he called a "big dypiggedly" system. Times have changed; now we have a strong belief in his successors to take over the whole operation, not just to coordinate but to control. In those halcyon days the mood was that of Mrs Thatcher's White Paper *Education: A Framework for Expansion* - now the framework is the public expenditure White Paper and the DES is compelled to look for mechanisms of control; instead of dealing with a many-headed Hydra it wants to be able to squeeze just one neck. I now find myself wanting to change sides, not perhaps to espouse all Toby Weaver's arguments, but certainly to look at the current proposals.

The DES is a very late convert to the idea of planning. Even during the hectic run-down of teacher training, not so many years ago, it was the department which encouraged ideas of "diversification", a con-mirage in many cases, and leading to a random proliferation of aimless courses and a deliberate blurring of demarcation of roles. We are perhaps now seeing the last of the "everyone may try anything" phase - and not only in public sector higher education. Perhaps we should think again about poly-functional institutions and encourage specialisms in fewer centres; there is much overlap at present and much that is spread too thin.

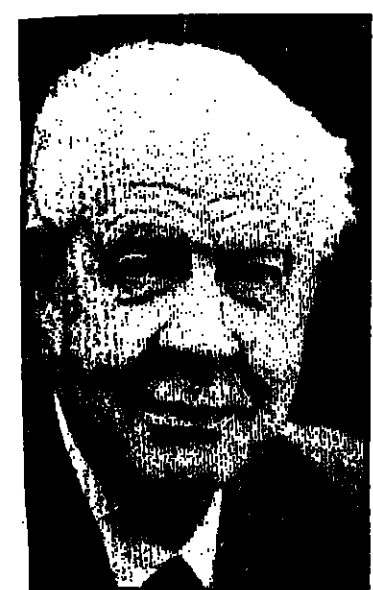
How can we achieve rationalization without rigid central control, when the present alternative - reliance on the voluntary and fragile cohesion of local authorities - seems a non starter? Is there any mileage in a truly regional approach? Not, I hasten to add, based on the regional advisory council model, but recognizing that all higher education institutions (including most universities) have pronounced regional roles.

The local authority interest would be there, but within a broader context - one which recognized the importance of maintaining the vital

connection between the institution and their immediate catchment areas, which is most cases cover a number of local authorities. Without such a strong link the institutions tend to drift and lose political support. All my experience leads me to seek a middle way between monolithic national control on the one hand and haphazard and vulnerable local control on the other. Perhaps ten years from now we shall have found the answer.

Sir Norman Lindop is Director of Hatfield Polytechnic.

'I am truly shocked by UGC policy'



Lord Robbins

In 1963 the Committee on Higher Education, having regard to the future of demand, assumed as a principle of its recommendations that places should be available for all applicants who were able and willing to benefit from such education, leaving to the institution concerned the right of setting the standards of admission.

This formula was accepted both by the Government of the day and the Opposition; and up to just recently it has been the unquestioned - and observed - principle of policy regarding numbers. What has not been observed, however, was the accompanying rider that the main recommendation would not have been made if it were not assumed that a larger proportion of broader first degrees could be provided in the universities.

Now the interpretation of broader first degrees is a controversial matter. What is not open to controversy, however, is the fact that, with some honourable exceptions, this requirement has not been met and, in contrast to the rest of the English-speaking world including Scotland, a comparatively narrow honours system, containing much that elsewhere would be left to the graduate schools, is still the order of the day: the late Lord Snow's prediction that we were breeding two - and possibly three - cultures, unable to communicate, is being fulfilled.

What is worse, such specialization has invaded the schools. I wonder in what other civilized country children of the tender age of O-levels are asked whether they prefer to be natural scientists, humanists or even social scientists. The Committee on Higher Education might have been speaking to deaf ears so far as the vice-chancellors and senior academics who arrange these matters have been concerned.

Returning to the central principle as regards numbers, let me say as emphatically as I can, that the recent instructions of the University Grants Committee, in the past so admirable, are a complete reversal of this principle. No one can say that exact number of students who, having been an entitlement to enter universities, will be debared; but it is not inconsiderable. And it is no refutation of this assertion to say that in the technical colleges and in the polytechnics, places can be had for

such unfortunates. The choice of standards was left to the universities; but, by the decision of the UGC, the universities are prevented from taking more than the prescribed numbers.

Thus, I am truly shocked by the present policy of the UGC. But I am not shocked by the view that, in our present financial circumstances, higher education can bear some cuts. I do, however, believe that such a policy could be carried out without odious discrimination and the bullying of institutions of recent foundation or upgrading. Let the UGC and the Treasury fight it out and then, in the main, impose equal percentage cuts on the grants of each university, leaving it to the governing bodies concerned to decide how to bear them. I think this would be much simpler and more effective. The Treasury point of view would be unaffected; and the UGC would be spared much trouble.

There is one group of institutions for which some exception should be made in this connection, namely, those often very famous institutions which are liable to be especially hard hit by the prospective reduction in overseas students caused by the very unwise policy of so-called "full cost" fees. I have stated my views on this problem elsewhere. Here I will only say that the situation in this respect is so grotesque that when the results which any well-informed person could have foretold have made themselves manifest, no Government could fail to do something. Therefore the sooner some generally applicable formula is worked out for those whose institution suffers more than a percentage minimum from this folly, the better.

Lord Robbins was chairman of the Committee on Higher Education which reported in 1963.

Golden age for new students?



Tom Owen

What really happened? The events were chronicled, but did we miss the trends? A few random examples may light up the dark.

The 1970s, it is believed, saw the over-fulfilment of the Robbins growth plan in the university sector. Even in quantitative terms, this is not true. In 1963, higher education took 8,000 students more than the target of 230,000. The gap had increased to over 100,000 by 1970-71 (446,300 instead of 344,000). The 1970s actually brought the system more or less into line with Robbins, the gap reducing year by year. Nevertheless, there was expansion, so that universities did show a quantitative change.

Yet the major change, and the major achievement threatened by the latest cuts, was possibly qualitative. Expansion has meant by 1981 that there can be few departments by now without a proper range of experts, their teaching at Honours level based on personal research in their area of the subject. By 1981 most university buildings (pace the libra-

ries) were suitable for their purpose. For the intending student, this was the Golden Age.

Those students we are told, did not appreciate their luck. From 1968 student unrest marked the 1970s. Registrars cannot change policy, but registries took the brunt of sit-ins and rent strikes. Meanwhile, academic life continued, most students worked, and it is a fair guess that the failure rate declined. The truth is that the 1970s broke student power. Registrars now know how to cope with rent strikes (sue them) and sit-ins (seek an order). Crying "Havoc", increasingly, sounds like crying "Wolf". In the 1980s the universities are going to need their expertise in coping with student troubles, as student amenities and services will undoubtedly be cut.

Since I spent all the 1970s discussing the revision of our charter and statutes, I might see the decade as a period of change in the balance of power within the university system. Universities were perceived to be involving academic staff more in real decision-taking, at the expense of lay members of councils. Within the academic staff, power might be moving to the people. *Alexis de Tocqueville*, the despotic Head of Department is to be replaced (but have we forgotten *abusus non tollit usum*?).

Since I do not know any despotic Heads (except myself?) it all seems, in retrospect, slightly puzzling. Since power is a Bad Thing, why were many of the proposals discussed in the 1970s aimed at moving power, rather than dispersing it? If the 1970s had thrown up a movement towards more communities of scholars, the discussions might have been worth it, after all. As to the lay involvement in the universities, though considerably modified, it remains strong. The changes of the 1970s would have done a disservice if academic staff could not now rely on councils to involve themselves and protect threatened universities by wise allocation of resources and wide protest outside the universities' walls.

Within the Registry, life seemed to become more complex. The 1970s were much concerned with Health and Safety, Employment Protection and other complicating Acts. This was misleading too. In the end, these convoluted Acts turned out to be codifications of common sense and good practice, and one could return to these as one's guide. If any esoteric rule is broken, the staffing office will put you right. Of course, one must eschew small kindnesses, like advising misfits to seek another post to avoid the stigma of the sack, but generally the new complexities of

the 1970s are, after all, tolerable. In this random list, should UGC also be perceived as changing its role? That is a large question, to which I can only reply that the UGC terms of reference were unchanged, and that the committee was and remains not the agent of government, but our only hope for a future free of direct control.

Tom Owen is registrar of the University College of Wales, Aberystwyth.

Less ferment - but more conflict



Asa Briggs

There have been so many setbacks in British higher education during the last ten years that it is more difficult to point to things which have gone right than to things which have gone wrong.

If the causes lie in economics, the consequences affect psychology more than anything else. There is far less intellectual ferment, far more tension and conflict between different interest groups. Universities, which during the 1960s looked outwards, now look inwards. Horizons have narrowed. For young would-be academics looking for jobs there are

no horizons at all. Pressure on resources in this field at least does not encourage innovation. Nor does it foster excellence. We have not gone back to the position before the great university expansion began, but there are probably more people who now feel that the expansion should not have taken place than there were opponents of expansion during the late 1950s and early 1960s. This is an indictment of the society in which they exist. They have not got their message across, and now it is not clear that there is a message ... or messages.

I worry most about this when I try to relate what is happening in Britain to what is happening in other parts of the world. Universities everywhere have problems, but in many parts of the world people still put their trust in wider social access and in curricular change. Higher education figures higher in national priorities. Moreover there is more sense of its international importance. I have heard more criticism of our overseas students' policy than of any other element in our own system.

Universities cannot afford to look inwards even if Britain as a whole looks increasingly inwards. They have done rather more over the last ten years, I believe, to develop European interests and at the same time to do issues themselves with Third World issues than most institutions in our society, but they have still not done enough. I had hoped that we would make an educational contribution to the life of the European Community - and to give it an educational dimension - but we have scarcely done so. Meanwhile, our institutional links with institutions in the developing world are less than they were ten years ago.

As for our own problem-ridden society and culture, there is an element of doubt as to whether it will hold together. We should be concerned about social access to higher education, about higher education and social and economic adaptability, about the preparation of teachers. Although they are meeting a number of short-term needs, universities, I fear, are less centres of initiative in society than they were 20 years ago.

I wish I could salute the change in the name of realism. I believe that there was more realism then about what needed to be done than there is now.

Lord Briggs is Provost of Worcester College, Oxford, and was formerly vice-chancellor of the University of Sussex.

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But the warning signs were there. In Britain's declining economic performance relative to her competitors, in citizens growing disillusion with ever their social class, with institutions of higher education because of the absurd and unconstructive manifestations of student unrest; in the decrease in the growth rate of the science vote which meant that some cherished objectives like a solely British High Flux Beam Reactor became unattainable; in the concurrent concern with public investment of science which did not appear to produce the desired economic growth and was perhaps mis-directed. Most worrying of all to me, was the 'swing away from science' in quantity and within that another swing away from the physical sciences within our schools, which began about 1960, was unabated in the 1960s and was a clear portent of future trouble.

In the next decade these chickens came home to roost. In 1972 there was the Government's White Paper on research and development which brought some improvements but some disadvantages to the research councils and universities and one of these decisions, the transfer of funds from the MRC to the DHSS, because of its unproductiveness, has recently been reversed. The age participation rate did not rise as expected and this, coupled with the swing of student choice already referred to, led inevitably to some distortions and inequities, eg, although the acceptance rate of applicants was higher and the required minimum A level grades for admission lower in science and engineering than other facilities there were still many 'vacant places' in these subjects in universities and consequently the polytechnics and some technological universities including law (we all remember the absurdity that the philosophy department next in size to Oxford was to be found in a polytechnic) and overseas students helped to fill the vacuum to the extent that about one-third of the post-graduate population in universities came from this source. Without this influx the engineering research output of universities would have declined by more than 50 per cent.

So when the 'dash for growth' was accompanied by sharply rising inflation higher education was especially vulnerable to the public expenditure cuts which followed. On the 1st October 1973 came the moratorium on university building, a little later the removal from the recurrent grant of the 50 per cent inflationary protection, the much valued and vitally important equipment grant was cut, quinquennial financing and planning gave way to belated annual financing and in 1974/5 the UGC had to bid (successfully) for supplementary grants simply to keep parts of the system from bankruptcy. Though the UGC did maintain its medical programme at full strength the unit of resource declined in subsequent years and this put great strain on the dual support system.

To increase revenue the Government raised overseas student fees despite the fact that nowadays trade follows the student and not the flag and that this act gives comfort only to the UGC (itself its *dirigiste* role first in libraries, then in slavonic studies and very much more widely in July 1981, all in order to ensure more cost-effective use of public money and as a prelude to the certain large decline in the 18 year old population between 1983 and 1995). It argued successfully for a planning horizon of years rather than months and by 1978 the system seemed to be coming back on course again; but we know the recent history.

On this meagre historical evidence – and I could cite very many examples – it has been a tumultuous decade, a far cry from the 1960s. What of the next decade? I have no doubt that knowledge is still the engine of progress. Indeed, it is essential for our survival. Higher education has a vital role in this but for success it needs to be planned at the national level and I welcome the steps to

bring the polytechnics into this process. However, for their part, governments must recognize that higher education is a long process and therefore requires a correspondingly long planning horizon and, equally, universities must be more adaptable, shedding themselves of some of their structural and curricular rigidities, becoming more able to recruit able young staff and to identify and actively support their good ideas and improvement. *The THES* can assist these processes by continuing its practice of providing a forum for informed comment and debate and I wish it well.

Sir Frederick Dainton was chairman of the University Grants Committee from 1974 to 1979 and formerly the chancellor of the University of Nottingham.

Seeking a middle poly way



Norman Lindop

Ten years ago those of us in the polytechnics who were advocating some kind of national body to coordinate public sector higher education were met by Toby Weaver's fine defence of what he called a 'big gleepypledge' system. Times had changed; now we have a strong bid by his successors to take over the whole operation, not just to coordinate but to control. In those halcyon days the mood was that of Mrs Thatcher's White Paper *Education, A Framework for Expansion* – now the framework is the public expenditure White Paper and the DES is compelled to look for mechanisms of control: instead of dealing with a many-headed hydra it wants to be able to squeeze just one neck. I now find myself wanting to change sides, not perhaps to espouse all Toby Weaver's arguments, but certainly to look at a chance at the current proposals.

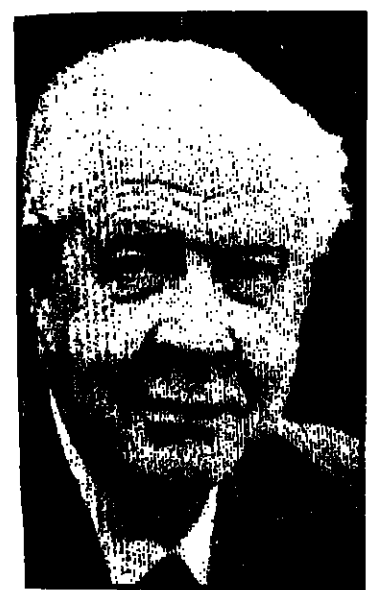
The DES is a very late convert to the idea of planning. Even during the hectic run-down of teacher training, not so many years ago, it was the department which encouraged ideas of 'diversification', a curricular mirage in many senses, and leading to a random proliferation of almost courses and a deliberate blurring of demarcation of roles. We are perhaps now seeing the last of the 'everyone may try anything' phase and not only in public sector higher education. Perhaps we should look again about poly-functional institutions and encourage specialisation in fewer centres; there is much overlap at present and much that is spread too thin.

How can we achieve rationalization without rigid central control, when the present alternative – reliance on the voluntary and fragile cohesion of local authorities – seems a non starter? Is there any mileage in a truly regional approach? Not, I hasten to add, based on the regional advisory council model, but recognizing that all higher education institutions (including most universities) have pronounced regional roles. The local authority interest would be there, but within a broader context – one which recognized the importance of maintaining the

connection between the institution and their immediate catchment areas, which is most cases cover a number of local authorities. Without such a strong link the institutions tend to drift and lose touch with the port. All my experience leads me to seek a middle way between monolithic national control on the one hand and laissez-faire and vulnerable local control on the other. Perhaps ten years from now we shall have found the answer.

Sir Norman Lindop is Director of Hatfield Polytechnic.

'I am truly shocked by UGC policy'



Lord Robbins

In 1963 the Committee on Higher Education, having regard to the future of demand, assumed as a principle of its recommendations that places should be available for all applicants who were able and willing to benefit from such education, leaving to the institution concerned the right of setting the standards of admission.

This formula was accepted both by the Government of the day and the Opposition; and up to just recently it has been the unquestioned – and observed – principle of policy regarding numbers. What has not been observed, however, was the accompanying rider that the main recommendation would not have been made if it were not assumed that a larger proportion of broader first degrees could be provided in the universities.

Now the interpretation of broader first degrees is a controversial matter. What is not open to controversy, however, is the fact that, with some honourable exceptions, this requirement has not been met and, in contrast to the rest of the English-speaking world including Scotland, a comparatively narrow honours system containing much that elsewhere would be left to the graduate schools, is still the order of the day: the late Lord Snow's prediction that we were breeding two – and possibly three – cultures, unable to communicate, is being fulfilled.

What is worse, such specialization has invaded the schools. I wonder in what other civilized country children of the tender age of O-levels, are asked whether they prefer to be natural scientists, humanists, or even social scientists. The Committee on Higher Education might have been speaking to deaf ears so far as the vice chancellors and senior academics who arrange these matters have been concerned.

Returning to the central principle as regards numbers, let me say as, as I can, that the recent instructions of the University Grants Committee, in the past so admirable, are a complete reversal of this principle. No one can say that exact number of students who, having been an entitlement to enter universities, will be debared; but it is not inconceivable. And it is not refutation of this assertion to say that the technical colleges and the polytechnics, places can be had for

such unfortunates. The choice of standards was left to the universities; but, by the decision of the UGC, the universities are prevented from taking more than the prescribed numbers.

Thus, I am truly shocked by the present policy of the UGC. But I am not shocked by the view that, in our present financial circumstances, higher education can bear some cuts. I do, however, believe that such a policy could be carried out without odious discrimination and the bullying of institutions of recent foundation or upgrading. Let the UGC and the Treasury fight it out and then, in the main, impose equal percentage cuts on the grants of each university, leaving it to the governing bodies concerned to decide how to bear them. I think this would be much simpler and more effective. The Treasury point of view would be unaffected; and the UGC would be spared much trouble.

There is one group of institutions for which some exception should be made in this connection, namely, those often very famous institutions which are liable to be especially hard hit by the prospective reduction in overseas students caused by the very unwise policy of so-called 'full cost' fees. I have stated my views on this problem elsewhere. Here I will only say that the situation in this respect is so grotesque that when the results which any well-informed person could have foretold have made themselves manifest, no Government could fail to do something. Therefore the sooner some generally applicable formula is worked out for those whose institution suffers more than a percentage minimum from this folly, the better.

Lord Robbins was chairman of the Committee on Higher Education which reported in 1963.

Golden age for new students?



Tom Owen

What really happened? The events were chronicled, but did we miss the trends? A few random examples may light up the dark.

The 1970s, it is believed, saw the over-fulfilment of the Robbins growth plan in the university sector. Given in quantitative terms, this is not true. In 1963, higher education took 8,000 students more than the target of 230,000. The gap had increased to over 100,000 by 1970-71 (446,300 instead of 344,000). The 1970s actually brought the system more or less into line with Robbins, the gap reducing year by year. Nevertheless, there was expansion, so that universities did show a quantitative change.

Yet the major change, and the latest cuts, was possibly qualitative. Expansion has meant by 1981 that there can be few departments by now without a proper range of experts, their teaching at Honours level based on personal research in their area of the subject. By 1981 most university buildings (pace the lib-

rians) were suitable for their purpose. For the intending student, this was the Golden Age.

Those students, we are told, did not appreciate their luck. From 1968 student unrest marked the 1970s. Registrars cannot change policy, but registries took the brunt of sit-ins and rent strikes. Meanwhile, academic life continued, most students worked, and it is a fair guess that the failure rate declined. The truth is that the 1970s broke student cope with rent strikes (see them) and sit-ins (seek an order). Crying "Havoc!" increasingly sounds like crying "Wolf!". In the 1980s the universities are going to need their new expertise in coping with student troubles, as student amenities and services will undoubtedly be cut.

Since I spent all the 1970s discussing the revision of our charter and statutes, I might see the decade as a period of change in the balance of power within the university system. Universities were perceived to be involving academic staff more in real decision-taking, at the expense of lay members of councils. Within the academic staff, power might be moving to the people. A *bar les aristos* the despotic Head of Department is to be replaced (but have we forgotten *abusus non tollit usum*)?

Since I do not know any despotism (except myself?) it all seems, in retrospect, slightly puzzling. Since power is a Bad Thing, why were many of the proposals discussed in the 1970s aimed at moving power, rather than dispersing it? If the 1970s had thrown up a movement towards more communities of scholars, the discussions might have been worth it, after all. As to the lay involvement in the universities, though considerably modified, it remains strong. The changes of the 1970s would have done a disservice if academic staff could not now rely on councils to involve themselves and protect threatened universities by wise allocation of resources and wide protest outside the universities' walls.

Within the Registry, life seemed to become more complex. The 1970s were much concerned with Health and Safety, Employment Protection and other complicating Acts. This was misleading too. In the end, these convoluted Acts turned out to be codifications of common sense and good practice, and one could return to these as one's guide. If any esoteric rule is broken, the staffing office will put you right. Of course, one must eschew small kindnesses, like advising misfits to seek another post to avoid the stigma of the sack, but generally the new complexities of

the 1970s are, after all, tolerable. In this random list, should UGC also be perceived as changing its role? That is a large question, to which I can only reply that the UGC terms of reference were unchanged, and that the committee was and remains not the agent of government, but our only hope for a future free of direct control.

Tom Owen is registrar of the University College of Wales, Aberystwyth.

Less ferment – but more conflict



Asa Briggs

There have been so many setbacks in British higher education during the last ten years that it is more difficult to point to things which have gone right than to things which have gone wrong.

If the causes lie in economics, the consequences affect psychology more than anything else. There is far less intellectual ferment, far more tension and conflict between different interest groups. Universities, which during the 1960s looked outwards, now look inwards. Horizons have narrowed. For young would-be academics looking for jobs there are

no horizons at all. Pressure on resources in this field at least does not encourage innovation. Nor does it foster excellence. We have not gone back to the position before the great university expansion began, but there are probably more people who now feel that the expansion should not have taken place than there were opponents of expansion during the late 1950s and early 1960s. This is an indictment of the universities as much as of the society in which they exist. They have not got their message across, and now it is not clear that there is a message ... or messages.

I worry most about this when I try to relate what is happening in Britain to what is happening in other parts of the world. Universities everywhere have problems, but in many parts of the world people still put their trust in wider social access and in curricular change. Higher education figures higher in national priorities. Moreover there is more sense of its international importance. I have heard more criticism of our overseas students' policy than of any other element in our own system.

Universities cannot afford to look inwards even if Britain as a whole looks increasingly inwards. They have done rather more over the last ten years, I believe, to develop European interests and at the same time to concern themselves with Third World issues than most institutions in our society, but they have still not done enough. I had hoped that we would make an educational contribution to the life of the European Community – and to give it an educational dimension – but we have scarcely done so. Meanwhile, our institutional links with institutions in the developing world are less than they were ten years ago.

As for our own problem-ridden society and culture, there is an element of doubt as to whether it will hold together. We should be concerned about social access to higher education about higher education and social and economic adaptability, about the preparation of teachers. Although they are meeting a number of short-term needs, universities, I fear, are less centres of initiative in society than they were 20 years ago.

I wish I could salute the change in the name of realism. I believe that there was more realism then about what needed to be done than there is now.

Lord Briggs is Provost of Worcester College, Oxford, and was formerly vice-chancellor of the University of Sussex.

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Strategies for a new beginning



Sue Shipman

It has taken a long time for education to confront strategy and re-define its purpose. When I first came across it in the late 1960s, it was still largely a process that happened when you took some 18-year-olds, removed them from the world for three years, threw in a dollop of intellectual rigour and allowed the brew to ferment.

I do not knock higher education. In its boom years it expanded its scope to people like me, providing escape from the awful prospect of working in Woolworths or pounding a typewriter for the rest of one's natural life. It only ever gave limited room to the offspring of manual workers, but we got there by the seat of our pants. On balance it was worth it. I remain eternally grateful. While the flame of intellectual enquiry did not burn as brightly as one had been led to expect and it was all a bit hit and miss, the pluses outweighed the minuses.

Our fermentation led to rebellion against the "ivory towers". Now something of a cliché, we felt passionately about it at the time. We demanded relevance and to prove our own set up worker-student alliances with Tories. The climate was sided we tried to be as much like workers as possible, even demanding a wage in recompense for our sweated toil. It is easy to make fun of it now, but we were partly right. Unfortunately we saw education as the front line of class struggle and forgot to question and re-shape its purpose.

In the mid 1970s the interregnum occurred. In student terms we marked this with the passing of the old new left and the emergence of the new old left. Stalinism gave way to democracy and there were even tacit alliances with Tories. The climate was already getting tough for education. As a result we were a little more realistic, a bit more pragmatic and a lot more effective.

The Great Education Debate came and went. It caused only a momentary ripple, but it was the first public attempt to grapple with and make sense of a world that had just gone like Tony. The debate was almost too late for education planners. The myriad problems of the world were closing in, and it has taken the fine honing edge of Thatcherism and the bungling of the UGC in the universities to make light dawn. After all, you can now see their ideology in the off and it remains inadequate.

So, after all the years, those hackneyed concepts of relevance, alliance and participation are finding a more organic reality. Admittedly some of the workers in this new alliance are vice-chancellors, but now is not the time to quibble over details. The alliance itself is broad enough and democratic enough to satisfy the most reformed student hack.

At Salford University the students have produced their "alternative strategy". It does not answer all the questions about education and what it should be doing, but it is a new beginning. Being threatened with extinction has had a catalytic effect. A pluralist mixture of people and their favourite prejudices about education have had to pool their ideas to find relevance, or else. They still have to marry up philosophical and political

values with survival, but don't we all. Throughout the period bits of initiative and hope have grown in response to real need. You find them everywhere in pockets. Multi-racial initiatives, new kinds of courses, the return of the adult to higher education, youth training opportunities, are all among them. We have the pieces; we are still searching for the missing links that will allow us to transform the institutions and their histories. We are at last stating that needs and objectives demand strategies. This could be the key to transforming personal prejudices into democratic social consensus.

Sue Shipman was formerly president of the National Union of Students and now works for the National Union of Public Employees.

Stability and commitment put at risk



George Tolley

Ten years of growth, but how much change? I want to comment essentially from the standpoint of what has happened in one polytechnic. In the academic year 1971-72 we broke the "2,000 barrier", that is we exceeded for the first time the enrolment of 2,000 full-time students stated in the 1966 White Paper to be the norm for polytechnic size. That year also saw the largest ever percentage increase in student numbers (21 per cent).

In 1972 we had that great document of hope and vision *Education - A Framework for Expansion* and immediately we were urged to put forward plans for expansion to 6,000 full-time students which we did, setting out sights on the early 1980s. Interestingly enough, we have exceeded the forecasts we proposed then, by a very substantial margin. It is both surprising and gratifying that we have been able to cope with such rapid growth with so little upheaval - or were our targets for expansion so very modest anyway? I suspect they were; another example of the gradualist approach which is both the pride and the despair of the nation.

I am surprised that we have been able to move from a student-staff ratio of about 6:1 to nearly 1:1 during this period with such little change in method and attitude and that staff have co-operated so fully and so well in achieving this quite massive shift without having compensating changes in resources. Yet, by and large, the growth, the much lower unit costs, the general improvement in standards, has been accompanied by a stability and a commitment to initial aims that have been reassuring and remarkably consistent. It is stability and commitment that are threatened in the next decade.

The biggest damp squib during the decade was student participation. The expectations of those of us who sought to get effective student participation have been disappointed. The biggest upheaval was the merger with three colleges of education. We went through a massive process of changing our product mix without shutting down the production line. In being conflict and demarcation disputes galore, we have not been given the credit we deserve for that salvage operation which we turned into an

opportunity for a new start. Crombie helped, of course, but that is a very minor part of the story. Achievement has brought esteem. To say that implies complacency, which I hope would not be the case. There is now a better understanding and recognition of what we are about and what we are, in spite of the magnitude of all the forces of tradition and mythology stacked against us in the schools and in society generally. The greatest disappointment here, perhaps, is that esteem has not been a quality which the local authority associations have bestowed.

The biggest regrets, looking back on the past ten years? One must be that CNAEA has not moved sufficiently quickly, as an organization, in recognising and proclaiming the quality and the integrity of many of the institutions it deals with. Here and there in CNAEA practices one sees and experiences what should be generally the case but the inertia of that organization is worrying. Another regret is that we have not done more for technician courses especially in giving a lead in curriculum development.

I see now students of better quality and better motivation than was generally the case ten years ago. I see staff who have carried the stress of growth without lavish, or even adequate, provision for that growth. I see the threat of an undermining of what has been achieved these past ten years and more - through an incomprehensible Government policy of cutting and carving; through the effects of recession; through the monstrously irresponsible dithering and dallying that is going on about policies for polytechnics.

Ten years ago there was a vision, there was hope and there was vigour and energy. Now there is still vision, hope has been dimmed and vigour and energy, already less than they were, are being sapped in unproductive activities. Yet for all that I shall be surprised if the next ten years do not show solid achievement in meeting the needs of the society we serve and to some extent redeem, and in both satisfying and challenging the persons who make up our community.

George Tolley is principal of Sheffield City Polytechnic.

Open letter to Sir Keith Joseph



Toby Weaver

Dear Sir Keith, Many people have said before you tackle the problems of organization and finance that understanding is one of the educational world's major weaknesses. Who is to have education? and "What is to be learned? In short, access and curriculum. These drive you back to the paramount question: "What is your aim for education?" You will find four main lobbies competing for your attention. They have both school and higher education gripped in a vice - and these are the strongest. They are the subject-mongers, the subject-mongers are the strongest, education gripped in a vice - and these are the strongest. They are the subject-mongers, the subject-mongers are the strongest, education gripped in a vice - and these are the strongest. They are the subject-mongers, the subject-mongers are the strongest, education gripped in a vice - and these are the strongest.

Toby Weaver was deputy secretary at the Department of Education and Science until 1973.

'academic' a lifelong sense of failure - and not just in Tuxted and Moss Side. For the most part examinations do no more than measure a person's capacity to acquire small and unrelated packages of knowledge, memorize them for a short while, and record them. The pursuit of scholarship and research is, of course, essential to any community, but I am talking about education. Scholarship is concerned with knowledge and how to acquire, discover, manipulate and transmit it; education is concerned with people and how to help them by learning processes to develop all their latent capacities.

This is the cue for the second lobby, the humanists. They are much more concerned that people should be helped to cultivate discriminating judgment and fine feeling. Their main educational aim is to strengthen the character and, as William Temple put it, to quicken the imagination.

Members of the third lobby, while they rightly share the humanists' view that man cannot live by bread alone are more conscious that he cannot live without it. Their concern, as yours is known to be, is with the individual's wealth and with the individual's need for fulfillment through his or her work. Their aim, then, is to prepare people for jobs; call them the manpower-providers. But in a rapidly changing world jobs change and alas, disappear. More important still, the good life involves much more than doing a job. Vocationalism is not enough.

The last lobby starts from a concern, not for knowledge, not for cultivation, not for jobs, but for people: call them the person-developers. They see life as the field for effective and right action, with man's distinctive characteristic his capacity to cope with himself and his environment and to cooperate with his fellows in building a happy community. As well as *homo sapiens*, man is *homo faber*, a maker, a doer, an inventor, an organizer.

For this lobby the task of education is to help people use their powers of comprehension and cultivation to tackle and solve their problems. They stress as their aim the development of a general capability to reach sensible decisions and to manage effectively the myriad demands of ordinary life, and to act wisely and lovingly in communion with other people. John MacMurray, the Scottish philosopher, put it in a nutshell when he said "All meaningful knowledge is for the sake of action, and all meaningful action is for the sake of friendship."

All good teachers instinctively support this lobby but they and their pupils are trapped in a system promoted by the subject-mongers to meet the need of scholars. The examination system, designed in turn to select scholars and supported by employers for want of any sensible method of credentials, stifles the genuine desire of the person-developers to develop all-round capability.

If, Sir Keith, you can find a way of liberating the teachers to do what they really want to do you will go down to history as the greatest Minister of Education of the century. As a modest first step you may like to examine three pioneering efforts at liberation. First, the growing "Education for Capability" movement; second, the cooperative problem-solving method of education pioneered by Professor Revans under the name of Action Learning; third, the School of Independent Study at the North East London Polytechnic, which is showing conclusively that hundreds of intelligent young men and women previously assessed by our school system as totally incapable of higher education quickly flourish when they are given the initiative in deciding what they want to learn and how to learn it instead of being faced with packages of mostly irrelevant knowledge. I believe you will find these three initiatives are pregnant with solutions to your first-order problems of access and curriculum. You will then know better how to organize the system and where to put your resources.

Yours sincerely, TOBY WEAVER

Tessa Blackstone is professor of educational administration at the University of London Institute of Education, and a former member of the Central Policy Review Staff.

Goal must be life-long learning



Tessa Blackstone

Last week I had a discussion with a 38 year old man who left his secondary modern school at the age of fifteen. He is a skilled worker, married with four children. His wife does shift work at night. He is an active trade unionist and a Labour councillor. Somehow on top of all this he has found time to take an Open University electronics degree which he has nearly finished.

The hours between 10.45 pm, after his political work has finished and he has dropped his wife at work, and I am free for study, he would like to go to Ruskin College, Oxford where he has been offered a place to read Philosophy, Politics and Economics. He can't. He has four children to support.

It is a sad reflection of our system of higher education that a man who has so clearly demonstrated his dedication to self-improvement and to learning, a man who has also given his leisure time to serve his local community, cannot be rewarded by being given the opportunity of a period of full-time study. What has gone most wrong in higher education over the last decade is that a part of all the expansion that took place in the early part of this period and in the previous decade, we have done relatively little to improve the relatively little to improve the lot of the adult workers who missed the bus at eighteen to get on to it later.

As a feminist and a mother who has combined bringing up children first with completing my education and then with pursuing a career, I have obviously felt a special sympathy towards married women with families trying to obtain higher education. However, in many ways the plight of adult men with families is worse. First the values of our society impose on men a more powerful obligation than on women to support their families as breadwinners. It is therefore often easier for mothers to take a degree than for fathers. Secondly because of the current inequalities in male and female earnings, a man in any case is much less likely to be able to rely on his wife's earnings to support the family than a woman can rely on her husband's.

There is then an urgent need to devise financial schemes that improve the chances of older women and especially older men of experiencing higher education. One possibility is to introduce a system of entitlement whereby every adult young person qualifies for a maximum of say two years full-time study. A student wage might be supplemented with maintenance allowances according to need and with cheap loans.

To hope that by 1991 our universities and polytechnics will have been transformed into genuine institutions of life-long learning with as many students over 30 as under 30 is to be a little optimistic. But if in this next decade when the numbers of 18 year olds will fall every year after 1982 we cannot make some inroads into this problem, I wonder whether we ever will.

Don't overdo the self-reckrimination



Gareth Williams

The 1970s saw the first signs of what will be the fundamental difficulty for the academic profession in the 1980s: the absence of new blood. In *The Academic Labour Market* (1974) I showed that in some years of the 1960s one academic in five had not been in post twelve months previously. In new universities the figure was, of course, much higher. This created all sorts of problems: how can new staff be properly initiated when there are so many of them?

However, social pendulums always seem to swing too far, and the same calculation at the end of the 1970s would reveal a figure nearer to one in fifty, and by the end of next year it will be more like one in five hundred. For this reason, the reported proposal by the vice chancellors' committee to examine changes in arrangements for tenure of new staff will have little effect for two decades or more. Sensible as it is, it is a classic case of closing the stable door after the horse has bolted.

In trying to overcome our present problems, it is important not to over-

do the self-reckrimination. In the early 1970s there was no reason to doubt a continuing modest growth in participation rates for the rest of the century - at least sufficient to offset the demographic decline that was by then becoming apparent. Certainly we could not reasonably have predicted the vindictive and lunatic economic policies of the present Government. However, there is no logical basis for the frequent claim that if the universities had accepted Shirley Williams's famous 13 points in 1969 they would be any better off now.

The fundamental management mistake of the universities and polytechnics was such a high proportion of their income to full-time staff appointments. No firm would allow itself to get in a position where fixed commitments were such a large proportion of its income.

There would be academic as well as financial advantages in having a higher proportion of part-time staff than we in Britain, with our persistent traditions of *status pupillari*, consider to be appropriate. The case for linking research to teaching is largely based on the advantages to students of being taught by people who are active at the frontiers of their subjects; surely the same argument might be applied to those who are active in management, administration, the professions - indeed, we accept that it should be so in the case of medicine.

Three hundred years ago the Lucasian Professor of Mathematics at Cambridge decided that one of his students was a better mathematician than he was. He resigned his chair on condition that the student was Barrow and the student's name was Newton. How many of us, I wonder, would resign our tenured appointments to make way for a budding Newton amongst our graduate students?

Gareth Williams is professor of educational planning at the University of Lancaster and director of the Lerehulme inquiry into the future of higher education.

The Church's role in college life



Jonathan May

During the last ten years, particularly since the publication of circular 773 "Development of Higher Education in the non-university sector", there have been many changes in higher education in the maintained sector. The closures, mergers, reorganizations and diversifications have been regularly reviewed by *The THES*.

Amongst the institutions under reconsideration during this period were, of course, the Church colleges of education. Many of them remain Church colleges, some confining their contribution, as previously, to the education and training of teachers; others diversifying into other areas of further and higher education. Some, as their institutional future began to crystallize, found themselves in new partnerships.

Particularly interesting from where I sit were the new partnerships between Church and State: the co-operation of local education authorities and voluntary providing bodies

to form new institutions. This was carried to its logical conclusion when a new college, Derby Lonsdale College of Higher Education, a secular voluntary college, was formed from the Derbyshire County Council's Derby College of Art and Technology and the Church of England's Bishop Lonsdale College. Its reorganization has raised, as to a degree it has been raised in different ways for most Church colleges, a profound theological question.

This has to do with the Christian presence within a college and the Christian contribution to further and higher education. It no longer seems good enough to assume that the contribution of the Christian churches to higher education can be made simply by providing buildings, money and government on the assumption that somehow enriched institutions will result. The challenge for the Church is at once to seek no special position in what some theologians would call a 'secular city' and yet to accept the right, even the responsibility, of demonstrating the quality of the contributions of Christians of a plural society.

The less informal involvement of the Church in higher education in the future will pose (new and) penetrating questions which cannot be avoided. Are there areas of work which depend on the determination of Christians to see them there? Are there concerns for community and inter-personal relationships which are the richer for the support of the Church and its members? Is the college enriched because of the existence of a chaplaincy? To what extent has the loss of institutional control been counter-balanced by the liberation of the individuals?

The central question emerging is not a new one. It is Bonhoeffer's: Who Christ really is, for us today. There is some work to do, for some of us in Derby, and perhaps elsewhere, trying to pencil in an answer to that question.

Jonathan May is director of Derby Lonsdale College of Higher Education.

Tom Baistow assesses

The Times Higher Education Supplement

Finally, ourselves

To invert the second most memorable aphorism of that Gartered knight who is better left nameless, a decade is a short time in journalism. After all, the parent publication of *The Times Higher Education Supplement* had been recording our island story - and occasionally helping to shape it - for 186 years before it fathered *THE THES*.

But what a packed and fateful decade it has been for the youngest offshoot of *The Times* family to cut its teeth on: from the idealistic, optimistic, affluent, expansive, not to say simplistic, days of the Robbins golden (well, gilded) age to the hard-faced realities of *Harogues* Lawson, with its slavish application of the Grantham grocery double-entry book-keeping rules to the higher education industry.

Anxious dons may sigh nostalgically for those not-so-distant days when grants - recurrent, mandatory and discretionary - flowed like high table wine, departments grew like Topsy, new studies sprang fully armed, or at least fully staffed, from the woodwork, sociologists inherited if not the earth a profitable stretch of Academe Grove, all-expenses-paid sabbaticals were there for the wanting, foreign freebies were as common as silens, and the NUS could afford to concentrate its intellectual energies on the heady delights of demopover.

Yet even in the very first issues of *THE THES*, full of the problems of oversubscribed arts courses and the dearth of engineering candidates, there appeared a cloud no bigger than a woman's hand. The Secretary for Education and Science in 1971 was the relatively little known member for Finchley, whose first attempt to bring student unions under control evoked a sharply worded letter that warned: "Think again, Mrs Thatcher."

Prophetically, the top letter to the editor in issue No 1 asked "Should tenure be ended?" and voiced the hope "that you, Sir, will provide a forum for discussion whereby some of the sacred cows of learning may be toppled."

THE THES has certainly provided an invaluable forum for that and a thousand other topics, although the cow in question still grazes in the temples of learning, however uneasily. But the paper's vital importance to the teachers and the taught at universities and polytechnics is that its coverage and interpretation of events and developments and their analysis by distinguished contributors bring a much-needed wider perspective to a closed community most of whose members, whatever their specialist talents, have been at school all their lives.

This is not just the narcissistic view of one journalist puffing fellow practitioners - I have been known to criticize our trade. Having spent the last few years trying - with only limited success, I fear - to bring home to one university the need for real two-way communication (as distinct from xeroxed memos or bowdlerised senate minutes), both between the three main constituencies and between the university and the outside world, I feel that much of the intellectual inertia and lack of self-criticism that have left higher education a sitting duck for the Treasury can be traced to the cosy isolation bred by the departmental cocoon.

Just how vital *THE THES*'s role in eroding that barrier was underlined by the information vacuum during the Times Newspapers shut-down in 1979, when the Member for Finchley moved into No 10 and sent her oddly assorted Carlisle-Boyson team down to Waterloo to give educators a lesson in applied monetarism.

Looked at from a professional journalistic point of view, the success of *THE THES* springs from the fact that it is a well-rounded weekly newspaper, rather than just a specialist magazine. In short, by not only reporting the overt news but digging into the reasons behind developments, it provides the prerequisites

for any informed debate. (Incidentally, reflecting a national trend that hasn't yet breached the campus walls, the reporting staff, all male in 1971, is now half female.)

Well-rounded implies editorial balance, and two outstanding features in particular leave the flow of gloomy news from the universities of the world: Dons Diary, with its kaleidoscopic variety of personal experience, and Laurie Taylor's hilarious column. The column's real attraction is, of course, that even the most po-faced academic registrar (forgive the tautology) would find it difficult to discern where pure documentary ends and Taylor's art begins.

Not the least important aspect of the paper's role in promoting a wider perspective is the space it has given since the first number to higher education in other countries. In that issue, for example, it analysed an American situation that also was to foreshadow the shape of bigger, and worse, things to come: the Governor of California, a Mr Ronald Reagan whom it described as a "conservative Republican and former movie actor", had begun to cut faculty staff, stop all rises and attack academics as "work-shy". Plus ça change.

At this point it is pertinent to say that neither American nor French academics, who are going through no less traumatic a period, have any really comparable publication to keep them briefed. The *US Chronicle of Higher Education* is aimed largely at academeurocrats while in France *Le Monde d'Education* appears only monthly and covers all educational sectors - at double *THE THES*'s price.

All of which is not to say that the Higher Ed has no wants. The most prominent, ironically, is that a paper

for higher educationists should lapse too often into sloppy English, shaky grammar, idiosyncratic punctuation and highly personalized spelling ("imperial approach"). Commas appear where none is needed but not where they are; the possessive "s" is either absent or in the wrong place; and the hyphen is assiduously inserted where superfluous (re-adopt, pre-arranged) and never where it removes ambiguity - or is its absence from "vice chancellor" a sub-conscious (sic) assertion that university heads are just pimps in the prostitution of the tradition of learning for its own sake?

More a wen than a wart is the frequently overlong (not "overly long") article and book review which, perhaps reflecting the learned journal's false equation in which length plus prolixity equals authoritativeness, too often flatters the reader more than it enlightens.

Which brings me to the new man at the DES. Sir Keith Joseph's role as Mrs Thatcher's monetarist guru hardly offers hope that he will temper his predecessor's policy of reform by axe with the more civilized insight of an All Souls man. When *THE THES* had just been born, Sir Keith was wearing his social services hat and we at the *New Statesman* were discussing his bungled reorganization of the health service, the late Dick Crossman, our editor, summed him up, more in sorrow than in malice: "Poor Keith - his trouble is that he's overeducated." What that might mean in his latest ministerial manifestation only time - and *The Times Higher Education Supplement* - will tell.

The author, who contributes a column on the press to *The Guardian*, was formerly communications consultant at the City University, London.

The Pursuit of Signs

is a clear and wide-ranging assessment of recent literary criticism by Jonathan Culler in which he brings to bear the powers of analysis and exposition that have made his *Structuralist Poetics* an indispensable guide. Leslie Hill in *THE THES* found it "a constructive contribution, cautious yet incisive in its thinking... a collection many will find useful and thought-provoking." Gerald Graff in the *LRB* considered it to be "a reasoned defence of deconstruction, one from which both scholars and general readers will be able to learn a good deal."

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RKP

Dick Whall describes the genesis and development of one of the most significant art-works

The mechanics of fantasy

Dick Whall's *L'appareil pedagogique* has been one of the most significant and demanding art-works of the past decade. Taking art, technics and therapy equally as "solutions" to everyday contradictions, *L'appareil* continuously confronts the relation between mechanism, art and self, between art and its physical and cultural environment, and between art and education as modes of communication. Whall's work breaks down the conventional limits of the art-work and broadens the available range of social and creative discourse.

"Not every child who possesses a fantasy world is possessed by it. Normal children are easily recalled from their excursions. Disturbed children are not always able to make the return trip, they remain withdrawn. . . . When the individual has escaped into a delusional world, he has usually fashioned it from bits and pieces of the world at hand. Joey chose the machine and froze himself in its image."

Bruno Bettelheim's classic case study of the illness of Joey, a schizophrenic child from the Sonia Shankman Orthogenic School of the University of Chicago, appeared in the March 1959 issue of *Scientific American*. Reference was made to that article by Annette Michelson at a conference at the State University of Los Angeles in 1973, when the life-work and language-system of Dr Bettelheim's schizo-autistic patients were used as a model to assist the understanding of the semiotics and structural interrelationships of Marcel Duchamp's famous "Large Glass". *La Marée mise à nu par ses célibataires*, the work which dominated his most productive period.

Joey's acting out of his mechanical dependency—delusion was so skilful we are told; that others saw fit not to interrupt what seemed to be the very source of his life. He collected various apparatus; his machines were constructed from light bulbs, radio tubes, motors, masking tape, cardboard, wire and other paraphernalia, an amalgam of apparent debris. Those parts that could not be required or made were imagined. At the foot of his bed Joey had fixed a car engine, that ran him during his sleep, a carburettor that permitted him to breathe, a battery that powered a speaker that not only enabled him to talk but also to hear.

Joey in fact developed several machines: one was entitled the "criticizer", and this supposedly prevented him from saying words which have unpleasant feelings. Bettelheim says "he consistently maintained a reversal between animate and inanimate objects; Joey's tubes bled when hurt, and sometimes got sick". Machines were better than people, thought

Joey. If he spilled something, he thought his arm should be amputated because it did not work properly.

In the context of Annette Michelson's hermeneutic involving the syndrome of autism considered as a language system, and the mechanomorphic projection of role definition, a combined study of the mechanics derivative of the inventions of Joey and Duchamp proved revealing. There was a similarity of metaphor for example: Joey's wires carried imaginary current, his drinking straws, carburetors, exhaust pipes all aided his exhaling and ingestive processes; these equated conveniently with the Duchampian "wasp" and "sex-cylinder", the "net-work of stoppages" with stop-cocks and blood-vessel-like circular tubes, and "capillary tubes" and "malic molds", all part of the intricate iconography displayed between the panels of the "Large Glass".

Further into his case history, Dr Bettelheim relates how his patient also made notations which illustrated an electrical papoose fantasy, depicting himself totally enclosed and suspended in empty space. This could be correlated with the iconography of the "Glass" where the air-borne bio-mechanical bride is suspended and delayed in the upper section of the work.

Close to all of Joey's anal preoccupations are clear Duchampian bio-fluid analogies, for example the "love operation", "all grease and lubricity", the "love gasoline" secreted by the Bride's "sexual glands", "electric sparks of the undressing", and the "bachelor grinding his own chocolate". Suffice it to say the symbolic and visual comparison is a relatively simple one and could be developed in some detail. Of course the psychological states and especially the motives of Duchamp and Joey were plainly different. It must be indisputable that whatever Joey's mental state, he was made as subtle black comedy and defence against an unbearable reality, and his preventions for the most part effectively concealed the secret of his autistic behaviour.

For more than a decade Marcel Duchamp's efforts revolved around the construction of a complex aesthe-

tic machine. The texts offered in elucidation by Duchamp of that infinitely complex effort, concealed almost as much as they reveal, but there is no evidence in any of the material written by or about Duchamp that leads one to suppose that through the "veritable spectacle of the mechanistic pseudo-scientific, verbally inspired imagery" of the "Glass", that Duchamp was acting out anything but a self-declared state of withdrawal. It was entirely optional.

Both inventions clearly aided two quite different processes of defence. One group of hardware was obviously developed in order to aid an escape, and the other collection (presented pictorially and embellished conceptually), whether from an anti-art, drop-out, or indifferent position, was made as subtle black comedy and was aimed as a reaction to dogmatism. Humour, paradox and scandal were not the weapons of a schizoid or any person showing even the slightest (clinical) withdrawal symptoms. Duchamp's aloofness or indifference were part of a conscious and deliberate course of action.

Autism may be considered as an innate language or communication disorder, with such features as aloofness or withdrawal being symptomatic in the sense that they must of necessity follow on from the individual's failure to communicate. It seems that Joey (unlike Duchamp) did not so much elect to withdraw, for most probably he had never become normally involved with reality. Since Joey was not drawn outwards (initially), through the medium of language, he remained totally self-contained, he was his own source of comfort and pleasure. Objects, not people, provided for any deficiency. A contemporary art work set up as *L'appareil pedagogique avec ses apanages*, or "The Enigma machine together with its 'bombs'" (1969-1981) was surveyed against the mechanomorphic fables and defence mechanisms employed by Marcel Duchamp and Joey in a collaborative text by Alan Wood, Peter Whall and the author in January 1978 and published with a grant from the Arts Council to coincide with exhibitions of the life-work at the University of East Anglia and the ARS Gallery, London. This heterogeneous conglomerate art work

evolved over a period of more than a decade, and manifested in the form of an inert, fragile and essentially linear, semi-transparent and part airborne installation.

During the middle 1970s, the metaphor "machine" had been unwittingly adopted as the title for the work; however it became clear that this title left too wide a margin for interpretation. Those who are unfamiliar with the conceptual scheme by all accounts anticipated a mechanism resembling a motorized David Tinguely. In order to compensate, to eliminate the chance of misinterpretation and disappointment, the French *L'appareil* was adopted, as that described more exactly the essence of the subject matter, and also importantly it couched the work in a more humorous and poetic idiom.

The extraneous capability of the Polish wartime enciphering and deciphering machines prompted the detail of the title: "for the enigma machine with its 'bombs'". *L'appareil* means paraphernalia, formally referring to the range of articles possessed by a married woman. The complete translation thus reads: the paraphernalia of education with its intrinsic component parts.

The work originated as an ideal life-support system, designed to provide a modicum of comfort in the face of one kind of disagreeable reality or another. The subject for the creative enterprise was originally made to correspond precisely with the employment of the artist. The work was propagandist and involved some political and bureaucratic tanglement. As with a Kafkaesque allegory, it became necessary to invent a metaphorical cover under which to observe the disorienting situation while still remaining a party to it, and at the same time develop a parable of some complexity. The modified function of *L'appareil* in its turn provided for convenient and timely withdrawal.

An accompanying illustration (top) shows the author as a mute and motionless performer, an integral part of an art-tableau staged in June 1977. The tableau was made from bits and pieces collected from the world at hand, and also from props or sculptures especially made for the piece. The collection sets up a confusing assent and denial situation, one that was characteristically sym-

tomatic of a personal incubus, a situation of crossed references where the life-art mix, or the art and life-suffix (education) were drawn together in one work. It was seen as a demonstration of just how difficult a dilemma (of many) that had been experienced by the artist/teacher of art when ownership and authority and the ethical backlash of making art under pedagogical protests had occurred.

The conceptual schema that underlies the structural interrelationships of the work necessitates that there should be no hierarchy of artifacts. The collection of readymades together with archaeological fragments, for example, occupy both central and peripheral positions within the installation and cohabit metaphorically with components fashioned especially as sculpture.

Appropriation should be on a par with drawing. For example, a fragment of flint thunderbolt found and unmodified is as essential to the mechanics of the total work as a modelled ceramic point barrow. Even common material has acquired elevated status, for example, a length of black cord stretched and pinned across the floor of a gallery represents the world's oldest highway. A polythene curtain supports an accumulation of dust, which in turn symbolizes informational out from the centre of activity, and is categorized into a perspective for the liberal arts. The step-ladder in the work stands for a geological irregularity in the landscape, a place of outlook, a platform from which to achieve a mental leap. Wooden building blocks represent the colleges of Oxbridge, an aerial view supporting a page of *The Listener* ironically describes transference of philosophical knowledge. Knapped flint, a stand in for the seam of black floor, stone material found at Goringes Graves and prized by neolithic man. A small pile of sand was a left-over from someone else's exhibition and a that represents an art legacy.

Of course the symbology attributed to the objects is private to the work draws upon an idiosyncratic and closed system of language. The activity of realigning the function of objects differs little from Joey's

continued on facing page



The artist/teacher of art (above) with crossed references. Below: Detail from the art installation *L'appareil pedagogique avec ses apanages* or "The enigma machine together with its 'bombs'."

of the 1970s

continued from previous page

attempt to create a language that was to match experience.

Physical intimacy and dependence of Joey's order has not been possible with *L'appareil*, for most of the time the many hundreds of components have been stored in boxes and therefore remained hidden. Only on those occasions when the work has been assembled for exhibition purposes has there been any kind of exaggerated physical involvement. In spite of the objectivity brought about by the physical distance between the work and the originator, *L'appareil* has remained entirely engaging on an emotional and intellectual level. The full conceptual and metaphysical extent of the work has been kept alive by theoretical and philosophical exercising, while the shape of the work has been imagined and visualised repeatedly in the mind's eye.

During the initial stages of the enquiry, *L'appareil* evolved in a manner that was not unsympathetic with the Dadaist view of experience; the machine's absolute uselessness as an operational construct served as a reminder of Picabia's "hallucination of technology". The early notations and sculptures referred to a mechanistic and ironic interpretation of the educator's passage through the appendages of education. They included bio-mechanical analogies and graphic metaphors for cyclic processes, for methods of information selection, sorting, storing, recalling and conveyance, and also for inhaling and exuding operations.

Subsequent work expressed a change of emphasis and focus, and instead of the fantastic machine interest, it dwelt upon the detail of actual paraphernalia involved in the promotion of the concept of education as training. One drawing entitled "Global Child" coincidentally reflected the suspended papoose/bomb imagery, equating education with the continuous action of nurturing as in the case of Joey and Duchamp.

Saïre was inspired by blackboards, chalk, white protective clothing, classroom furniture and instrumental, educational archaeology, notices, diagrams and jargon. So rich was the material for the creation of poetic sarcasms that the activity of art-appropriation had to be curtailed.

The concept of education and the process involved in the transference of knowledge has always been observed to be synonymous in *L'appareil*. The pedagogy was set up as attendant or overseer of dogmatism while the educator is seen as counteracting the flow of information. For example, a screenshot entitled "A pedagogy taking every care to control his facial expression in order to avoid betraying an adverse reaction to what is being said by the educator" (*The Times*, November 26, 1976) was meant as a paradoxical proposition.

The third level of interpretation of the meaning of education necessitated a study of the effect of cultural sedimentation manifest in the English landscape since early settlement. Emphasis has been put on the incidence of "parallelism" between cultural trips. Since 1976 the work has drawn essentially from the disciplines of anthropology, social history, art, history, archaeology, architectural history and geography.

L'appareil's usefulness has fluctuated as circumstances and context dictated, and as the self-declared state of indifference has been allowed to manifest. The invention has assumed the part of a temporary compromise solution—a defence against basic anxiety—and this has not so far shown any signs of being outgrown; it was of course developed as a life-work, supposedly capable of nourishing and accompanying the author into pedagogic retirement.

The author is Senior Lecturer in Fine Art at Coventry University, and is Visiting Professor of Fine Art at the University of Massachusetts in Spring 1981.

We do not know whether Sir Stuart Hampshire had a religious upbringing, or whether Christianity has ever appealed to him as a personal religion. What seems likely is that, while he was an undergraduate and during the war, he came to assume that the role that Christianity had played in European culture should now be played by a mixture of socialism, Freudianism, and philosophy, and which was one version of average opinion among clever men in his generation and achieved its first historic embodiment in the mentality of June 1941. It was the digestion of this mixture that gave unity and coherence to the writings that he produced in the 35 years after he returned to academic life when the war was over.

The impression that Hampshire left in the 1970s was that, in the end "we know how little we know about the conditions under which, given our present knowledge, the moral ideals of socialism can best be realised." Spiritual deflation, however, was the sad outcome of a prolonged attempt to give life significance by understanding it in a way which riveted the utopian difficulty had become overwhelming, he approached this problem in two connected ways.

Chronologically first and logically prior, from the late 1940s onwards, was the attempt to break down the separation of morality from fact, and to restore to moral philosophy the power to guide practice. Hampshire emphasised the sterility of the merely analytical, the attractiveness of the "metaphysical temper", and the complication of the relationship between the self and reflection about the self. He argued that "practical reasoning, if pressed to its conclusion, must always end in arguments that belong to the philosophy of mind", and that philosophers had a duty to evaluate the "tentative and perhaps uncritical" assumptions that lay concealed in "most moral and political argument, in jurisprudence, in economics, in psychology, and the theory of education, and in our day to day thinking about ourselves and our friends."

In *Spinoza and Thought and Action* primarily, but elsewhere as well, Hampshire argued the case for metaphysics, his thirst for metaphysics being a facet of the belief that the utilitarian positivism he was rejecting, and all post-Kantian moral phi-

'Philosophy enables citizens to see what they have to do'

losophy, had cramped and cabined the philosophical imagination. His argument was tentative, the expression of a hope, not the basis of an achievement; there was so little positive construction that his most impressive writing must be judged to have contributed to public, rather than to the detailed elaboration of a metaphysical doctrine.

For Hampshire philosophy has a technical function, but its most important function is to enable citizens to see what they have to do. In doing this, it has to disconnect itself from the "journeyman clerks and professors who carry on the business of the schools", and it has to do it moreover, by achieving a character as literature. It is as literature that Hampshire sees philosophy issuing in public doctrine.

Hampshire's doctrine contains three main elements. There is a recognition not only of "mystery" but also of "tragedy" and depth of subjective feeling: there is pessimism, and a sense that modern progress is not what it might be; and there is an affirmation of freedom, individuality or internality against the death-giving pressure of social conformity. These three elements are drawn together by the conception of imaginative literature providing the relaxation which individuality needs from the enforced conformity of social life. It is the intimations of the inner life and the doubts about modern progress which appear in writers like Ibsen, Pasternak, Russell, Conrad, Eliot,

Sir Stuart Hampshire and the public realm



Maurice Cowling on the writer's conception of morality, philosophy and politics

Lawrence, Virginia Woolf, Freud and Wittgenstein, that Hampshire has treated as the "concrete equivalents" of philosophy's "high abstractions" and wishes to spread understanding of the public life of the western world.

By and large Hampshire has been despondent about "the west". He has had a sense of connexion between social context and literary ambition in the "western literary tradition", of the attenuation which western literature has suffered in the present age, and of the extent to which western writers have become incapable of "total statement". He has not, however, been led down the blind alley of literary Marxism. There has been a pre-eminent conclusion in "a certain kind of confusion" and in that "escape from security" which occurs when writers "disturb and rearrange" men's "usual picture of nature and artificiality in human behaviour". It is because he sees "an imposed social congruence" as being responsible for "constraint" and "losses in individual energy" that Hampshire thinks of literature as needing to promote a "vision of the bedrock of human nature". It is when literature does this, permitting a remission from religious and moral responsibility and the relentlessness of scientific rationality, and encouraging a "temporary moratorium on progress as a condition of society", that the "force of the imagination in a personal style" can create a "common understanding across the barriers of specialised interests" and give "ordered concrete embodiment" to the "unsocialised levels of the mind".

In the introduction that he wrote to *Modern Writers and Other Essays* in 1969, Hampshire seemed anxious not only to transcend that "irony at the expense of intellectual enthusiasm" which he attributed to Wittgenstein and Hume, but also to carry along with him the disruptiveness and unsettlement characteristic of the youth and undergraduates movements of the late 1960s on both sides of the Atlantic. The introduction was as negative and wearing a performance as the essay *Unity of Civil and Political Society* of 1974, however, and it is difficult to see what was left of "intellectual enthusiasm" except a moral commitment which Hampshire insisted obscuringly on preserving in the face of the "scholarship of non-commitment".

In the 1974 article, Hampshire, defined Socialism as an attempt by governmental agency to eliminate poverty and inequality, and to ensure that "primary and basic human needs are given priority within the economic system, even if this involves some loss in the aggregate of goods and services which would otherwise be available". At the same time he announced his disbelief in the possibility of "any . . . final liberation", whether Marxist or otherwise, and his conviction that Social-

ism needed a new theory of knowledge and social change to incorporate the surprising but disappointing fact that "the science of society" had failed to produce "accurate" general truths which could be used for "social planning".

This Eliot-esque weariness, or sense of difficulty, this demand for Popperian ignorance, this doubt about the prospect of achieving the enterprise in calculable time, was reflection in theory of the experience that English Socialism had undergone in its period of dominance and normality. Like most of the older Labour leaders over most of their lifetimes, Hampshire has been on the winning side, and does not expect very much more improvement to happen in the future. He has written, no doubt, and spoken as he has, because there have been readers to teach, and pupils to teach, and because the show must go on, even when it is morally finished. The audience is a ready-made one—or rather it was, politically at least; but Hampshire does not pay undue attention to its prejudices, his main purpose being to show how remote these prejudices must remain from practical political execution.

In Hampshire's attitude to "liberal democracy", there has been nothing either reactionary or puritanical. He has been concerned, chiefly, to point out that liberal democracy has been hampered by the inadequate view of human sensibility which he associates

'Men need a doctrine in order to reconcile themselves to the unavoidable dissonances of their condition'

with liberal capitalism. The main part of his writing is best understood as an attempt to avoid the conclusion that an adequate conception of human sensibility depends on something resembling a religion.

Hampshire's religion reflects and perpetuates the post-Christian situation, transcending enlightenment, positivism and science, but not able, constructively, to go beyond them. Hampshire wishes to be thought of as going forward into a world of difficulty and doubt where doctrine can recognise and explain the problems that the individual suffers from the inexorability of social life. His anthropology has been post-liberal, because it has recognised the priority of socialised life, and because the rational man of liberal individualism has been subverted by Freudian tragedy. Men are not, Hampshire implies, free agents who are able to choose their commitments. They inherit their commitments, it is true, and in the process alter themselves; but they inherit themselves, as well

as their ways of life, and are cribbed and cramped by their inheritances. And they need a doctrine which recognizes that this is the case. Not only in literature, but also in psychology, music, philosophy and anthropology—the "most sophisticated of the social sciences, apart from economics"—Hampshire sees men creating or comprehending the structures that they need in order to reconcile themselves to the unavoidable dissonances of their condition.

In 1964 Hampshire wrote of Wittgenstein as "wanting to say" of his philosophy that it had a "religious character" in so far as the "religious character" of philosophy avoided "orthodoxy", "transcendental assertion" and the "now-deadletter of theology", and involved a certain kind of "perspicuousness" which was inseparable from the "probing" in which it was embedded. This we may think of as being also Hampshire's conception of philosophy—a conception which was easy to reconcile with the unsystematic, and unrealised, character of his contribution both to philosophy and to scholarship.

Hampshire is conscious not only of the post-Christian nature of his situation but also of the comprehensive nature of historic Christian thought. He is conscious of this both in admiration and by contrast; in admiration, because he conceives of historic Christianity as having done, what positivism alleges is impossible, provide a metaphysical explanation of existence; by contrast, because if Hampshire's arguments in favour of metaphysics have stopped short of invoking the supernatural, Hampshire not only rejects theological ethics he also replaces them by a "way of life"—a "vague" but "complicated thing marked by . . . style and manner" which a group of people may share and transmit to their descendants, rather doubtless in the way that his vague and complicated socialism has become part of the British "way of life" and is not going to be argued out of existence.

The burden of Hampshire's public doctrine is that a way of life, established over the generations, is better than a doctrine—that the looseness, and sympathy, and rejected or neglected aspects of human energy characteristic of a way of life, make it possible not only for lives to be lived suitably but also for evil to be recognized and resisted. It is to the unity and clarity of utilitarianism that he attributes the utilitarian failure to impose unconditional prohibitions on conduct. It was because of their lack of interest in the "taking of life, sexual relations, family obligations and the administration of justice" that "salient features of every other morality" that utilitarians had permitted the development of that "grossness of moral feeling" and "abstract cruelty" which were endemic in "modern politics and planning" and achieved their culmination in American saturation-bombing in Vietnam where "gifted professors used cost-benefit analysis" to balance the "death of groups of persons" by "the very considerable gain in amenity" that would be "handed down to posterity".

The tone of Hampshire's politics is repugnant and would be improved by a good dose of Tory Statism, but we should not be repelled by his tone. His view of relations between imaginative inwardness and outward conduct has been suggestive, as have the fluidity of his conception of moral philosophy, the inwardness of the emphasis he gives to the significance of literature, and the practical nature of his conception of the moral life. If the final impression which he leaves is hazy and well-meaning, and too readily accommodating to the unrealizable demands of the bleeding heart, and if there is no attempt to address the problems which surround relations between the intelligentsia and the working classes to which his political opinions might seem to require attention; if, indeed, in the end he seems to resemble the archetype of everything political that Joyce Cary's Vandevelde Latter hated most, it is still the case that his writing contains, in an unguarded, self-indulgent and elitist manner, one possible reaction to the problems that arise from the coexistence of the individual sensibility with what he (wrongly) thinks of as the distressing compulsions of the public realm.

The author is a fellow of Peterhouse, Cambridge.

In his first great novel *Notre Dame de Paris* Victor Hugo proposed the theory that until the fifteenth century architecture was the principal register of mankind: "That all ideas of any complexity which arose in the world became a building; every popular idea, just like every religious law, had its monuments; that the human race, in fact, inscribed in stone every one of its important thoughts".

Perhaps Hugo's priest, who voiced the fear that "the book will destroy the building" (meaning here specifically his Church) would today look at the small offset litho press and then at the media establishment which has, in many respects, taken on the mantle of the old church, and would make the same remark. Radical publishing has flourished with the advent of offset litho printing and although it may not "destroy the building" it has certainly served to weaken the authoritarian infrastructure of establishment publishing and helped to expose its conscious and unconscious biases.

Since the political upheavals of the late 1960s and early 1970s, the Left has become increasingly fragmented; ideological and organizational dominance has slipped away from the traditional vanguardist parties towards smaller decentralized radical groups each increasingly better equipped to put forward its particular point of view through books, pamphlets and newspapers.

This shifting of centres, fostered by the revolution in publishing technology, has served to foster a more searching and radical exploration of values; a less authoritarian and more completely self-managed spirit is expressed not least in the healthy network of community based bookshops servicing the needs of the neighbourhoods and in the proliferation of radical publishing houses, each with its own particular historical, geographical, political or social priorities.

All these owe their continued success, despite the very deep recession in the commercial book trade - to the feeling of more and more people that they are outside the decision making processes of everyday life and to their desire to redress that balance by searching for new values and new ways of seeing the world.

The small radical publishers have a growing share of the market, competing with ease with the larger corporate publishing houses, the university presses and the state-controlled publishing houses of the Eastern bloc and China which churn out Marxist-Leninist tracts to an extent not exceeded by the Bible Societies of the nineteenth century.

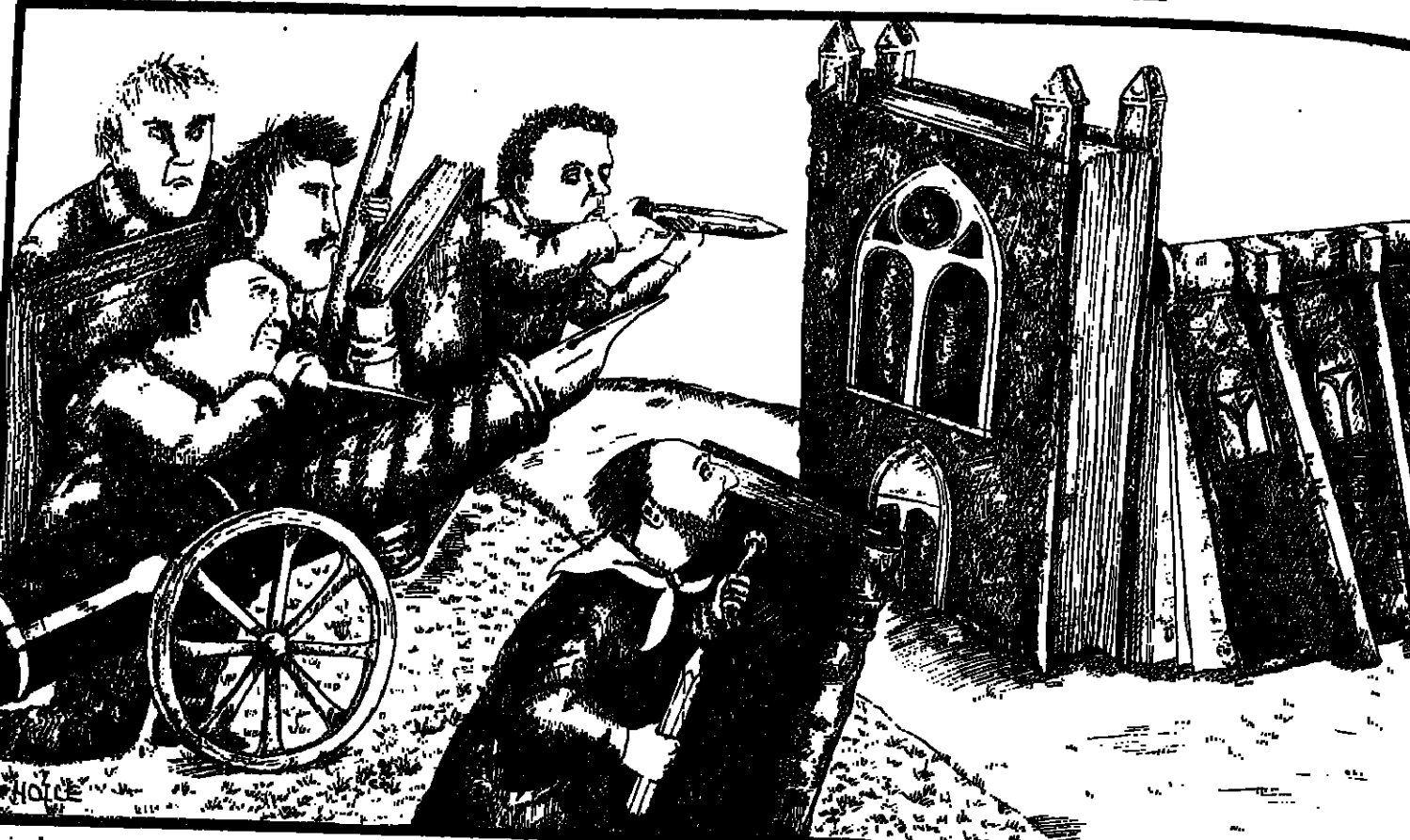
One thing long known by radical publishers is that we live not in a society in which freedom is tolerated until it seems to threaten the power and privileges of those who control and depend directly on the state and the economy. Free enterprise and the open, competitive market are, ideologically speaking, notorious relatives and this applies most crucially to the radical publisher. Freedom of expression is, of course, less a fiction to those who can afford the expensive luxury of a libel action or whose books and magazines are acceptable to the larger distributors.

Although radical publishers must at least aspire to profitability, few indeed can distribute excess profits among their directors or shareholders. Once the bills are paid, any money left is usually ploughed straight back in to consolidate and expand the publishing programme for people involved in radical publishing are concerned first and foremost to get their ideas across to as large a section of the community as possible.

Does radical publishing really threaten the status quo? The establishment seems to view it as a pest, but minor irritant, but also as a great potential danger in a time of crisis. Field-Marshal Lord Carver wrote in his preface to the *General Frank Kusun's Low Intensity Operations*: "If a genuine and serious grievance among such as might result from a significant drop in the standard of living, all those who dissipate their protest over a wide variety of causes might concentrate their efforts and produce a situation which was beyond the power of the police to handle. Should this happen the army would be re-

Stuart Christie looks at how radical publishers are surviving the recession

Freedom is a fiction



quired to restore the position rapidly. Fumbling at this juncture might have grave consequences, even to the extent of undermining confidence in the whole system of Government". There is little doubt that, in such a situation, the radical presses would be seen as one of sources of disruption, focussing and concentrating dissent as they do.

One thing that has undoubtedly helped Cienfuegos Press, for which I work, and whose priority is the social and political philosophy of anarchism, is the considerable adverse publicity we have attracted over the past few years; we now have more readers than ever, and other houses have benefited from the same inverse law of notoriety.

Each radical publishing house has its own priorities and its own peculiar problems. Ours arise from our anarchism itself. Our stated aims are to promote the widest possible circulation of the ideas and history of anarchism and self-management; to oppose all authoritarian systems and ideologies and to explore viable libertarian alternatives to the problems of our society.

A brief account of our development may give some insight into the structure finances and possible future of radical publishing houses. Named after Camillo Cienfuegos, the Cuban libertarian revolutionary whose murder by Raoul Castro signalled the political about-turn by his brother Fidel, the firm was finally established the press was formed in 1974 by myself and my wife following the "Angry Brigade" trial in which I was acquitted after spending 18 months on remand in Brixton prison.

Our first began with two books: *Sabote, Guerrilla Extraordinary* and *Man! An Anthology of anarchist ideas, essays, poetry and commentaries*. These two books were financed by money I received from post-rail interviews, translation fees, and donations from sympathizers; this is by no means an unusual means of raising additional capital by debenture. In 1975, and in a limited company, in present location in Orkney to avoid constant surveillance from the Special Branch, the almost inevitable concomitant of any radical activity and especially radical publishing.

The future that followed our publication of *Towards a Citizens Militia: Anarchist Alternatives to NATO and the Warsaw Pact* was a case in point, and, while remarkable, by no means unusual. The introduction made it clear that the book was not intended as a do-it-yourself guide to military revolution - a ludicrous concept for anarchists anyway - but a guide on how to organize resistance to a foreign invasion, Soviet or

other, or to a military coup d'état. The outcry was that the book should be banned and Cienfuegos closed down. This, and the case of a young Italian student living in Brixton at the height of the riots who was raided, arrested and sentenced to deportation on the strength (this was the evidence offered) of Cienfuegos books found in her flat, highlighted that focussing of repressive attention on the radical press which follows any such upheaval.

Why is this kind of reaction so virulent? Surely there can be no democratic objection to showing that there is an alternative to statism, and alternative to capitalism and consumerism that is not Marxism-Leninism and vice-versa?

In the recent Brixton case we can safely assume that the police and court would have found little to object to had they found essays on monetarism or on the role of the proletariat in a controlled economy, or even (such as have been circulated apparently freely by neo-fascist terror groups) discussions of the relative merits of Zyklon B gas as against repatriation. What concerned the court here and led to the outcry *Towards a Citizens Militia* was not the information in the book, which was available from many other respectable sources, but the fact that it was being directed to the general public.

The very idea of a popular defence alternative was anathema to those right thinking guardians who had just spent £13 billion allegedly trying to do the same job. What they and those who think like them do find objectionable and threatening is the non-authoritarian philosophy and the anti-authoritarian attitudes which this alternative implies.

Apart from the many commercial and left-wing bookshops who were scared away from handling *Towards a Citizens Militia* by the media and political outcry against us, we also lost our radical alternative trade distributors; their refusal to handle the book, on advice from both Scottish and English radical lawyers, exemplified a particularly insidious and potent form of censorship. We withdrew all our titles from their lists.

More seriously, however, was the effect on one of our regular printers and binders: they refused outright to handle anything further from us; they felt they would be laying themselves open to police and state persecution. While it is no great problem to organize a distribution network and print small pamphlets and booklets, there are no actual printers and binders in the world who are equipped either to handle our larger books (over 200 pages) and provide us with normal credit

facilities. I imagine most radical publishing houses are badly undercapitalized to begin with. One of our strengths is that we are a subscription-based publishing project, and we coordinate a multinational network of participating sympathizers from as far afield as New Zealand and Alaska, Hawaii, Finland, Cape Town and Buenos Aires. Most of these participants, like Michael Moorcock and Noam Chomsky, regularly contribute their professional skills, labour, material and ideas to the project as well as money. Since 1974 we have been able to publish almost 40 titles in this way.

In spite of the fact that our turnover has doubled every year for the past few years we are finding it very difficult to keep pace with production costs, which have escalated in the same period, and the credit squeeze.

Ironically, our size and flexibility have enabled us to weather the storm rather better than the larger commercial houses, which are now being hit hard by the recession and are announcing redundancies every week.

Probably the most important things on our side are our very low overheads (other than transportation costs) compared with what similar publishers in inner city areas would have to pay, and our committed and loyal group of around 600 subscribers, with our further two thousand more or less regular international mail-order customers.

Cuts in library buying have not affected us greatly, but, as with the majority of houses, we have had to limit the number of hardback editions and concentrate on larger format paperbacks. While success or failure does not depend on the vagaries of the market place or the current economic climate the radical presses must give serious thought to the best means of avoiding compromising political aims while remaining viable.

Although titles sell our fairly quickly - a print run of 3,000 copies would last a year, more or less - we usually invest our limited resources in new titles and allow old ones to go out or print. One unexpected bonus arising from this is the intrinsic rarity of short-run books. Many of our titles are now sought after as collector's pieces, such as Flavius Constantinus' *Art of Anarchy* and the first four issues of the *Cienfuegos Press Anarchist Review*. While this arrangement does help to keep turnover up, it also means that unless we catch the imagination of some philanthropic libertarian millionaire (if such a creature exists) or come up with a cult best-seller, all our minor classics are doomed to a limited circulation of around 3,000 anarchic and secret policemen. This is a problem all the small radical presses inevitably face.

Ideally all radical publishers should have their own typesetting, printing and finishing facilities. This, of course, is no longer a pipe dream. Only then will they be able to escape the political whims, fears and prejudices of the state and marketplace on which they remain (ironically) dependent. One problem fairly unique to us is our geographical remoteness. Operating from the secluded North Isles of Scotland has its advantages, but again escalating costs are considerably to the budget.

One unforeseen cost we have had to bear came when almost the entire edition of one of our periodic reviews was lost in a lorry fire while in transit from the printers. To a commercial publisher, this would probably represent only a tiny loss in proportion to his total run. To the small independent press it is disastrous, a complete loss.

To counter this and similar disasters we are setting up co-publishing and distribution arrangements with supporters in Canada, the United States, Australia, New Zealand, Scandinavia and Southern Europe and, again, economic structures may lead to increased intellectual viability.

One interesting development in the radical book trade has been the birth of the Federation of Radical Bookellers, through which most radical and community bookshops and publishers throughout the country exchange ideas, improve mutual efficiency and establish solidarity in the face of a concerted campaign by the neo-fascist right.

The most recent project of the FRB is the Radical Bookclub which should get off the ground this autumn. Anyone can join through a participating bookshop and then buy any number of titles on offer at a discount. Victor Gollancz's Left Book Club of the 1930s similarly used bookshops as the main method of distributing their titles. Such a scheme gives the bookseller normal trade discount so there is no conflict of interest and thus works to every one's benefit and satisfaction. The only condition applied by the publisher is that the bookclub takes a minimum stock of 500 copies of each title.

What is the future for radical publishing? I think it will continue to grow in proportion to the desire we have to control our own lives and destinies, and the growing antipathy towards power politics and the competitive values of consumerism. In our own case.

The author is a founder of the Cienfuegos Press.

BOOKS

A character from one of his own novels

by Dennis Welland

Ford Madox Ford: prose and politics
by Robert Green
Cambridge University Press, £16.50
ISBN 0 521 23610 X

The Presence of Ford Madox Ford
edited, with an introduction, by
Sondra J. Stang
University of Pennsylvania Press,
\$15.00
ISBN 0 8122 7794 5

The simultaneous appearance of these two books conveniently highlights one of the several enigmas that surround Ford Madox Ford. Sondra J. Stang brings together essays and memoirs in which homage is paid to him by almost thirty writers, the majority of whom are American.

Robert Green's monograph is "the first full-length appreciation by an English critic" and it is published 42 years after Ford's death. Green's select bibliography of secondary material published since 1962 identifies 120 essays on Ford, most of them in American publications, and 18 books on him, all issued in the United States. There has been a nineteenth since that list was compiled: Thomas C. Moser's *The Life in the Fiction of Ford Madox Ford*. Yet the past twenty years has seen on this side of the Atlantic a parallel revival of interest in First World War literature but without any great attention to Ford. The Bodley Head five-volume collection of some of his works (1962-1971) did not stimulate it either. More of his books are available in American bookshops but even there Allen Tate's prediction that "it will be easier to read about Ford than to read him" has certainly been fulfilled.

Representative of the British attitude is Bernard Bergonzi in *Heroes' Twilight* (1966). He speaks of *Parade's End* as "the finest novel by an Englishman" but was produced by the Great War, and somewhat equivocally sees its hero, Tietjens, as "heavily romanticised by Ford", its image of England as "exaggerated rather than false" and "the architecture of a large fictional structure". Greene's introductory essays in the Bodley Head edition, reprinted by Stang, reduce Ford to "the author of three great novels" and V. S. Pritchett once claimed that no one had read the others. Denis Donoghue's essay on *The Good Soldier* in the Stang volume seems to focus on general problems of fictional narration rather than on the text in hand.

Allen James, told that the English valued Emily Dickinson less highly than she did, took it as a justification of her own judgment that English readers "have such a capacity for missing quality: the robust evades Ford's case similar, and it so, why? Simplistic explanations come quickly to mind. The scandals surrounding Ford's private life - breakdown, divorce, imprisonment and an irregular but permanent liaison with Violet Edwards - were well known to the literary world, and as was Ford's propensity for fabricating anecdotes that went beyond the bounds of veracity and sometimes of credibility. All this mattered more at the time and less now. That the same was for a byronic streak: Yet this more private life should not be deterred or distracted by biographicalism if the work retained its appeal.

The recently televised dramatization of *The Good Soldier* may re-awaken interest in the book, but not the merits of that tale, not even Stang's contributors can agree. Robert Green, for example, observes caustically that "The fancy narration of

The Good Soldier blinds many to the fact that it is a shabby little shocker". His equally blunt comment that "It may be the saddest [story that its narrator] John Dowell ever heard, but then, he seems to have heard no others" exposes the sentimentalization of which so many of Ford's admirers are guilty when they accept at face value Ford's opening definition, hackneyed now by over-use. That *The Good Soldier* has neverthe- less been continually in print for a generation while *Parade's End* has twice in that time been allowed to go out of print indicates for Sale, who teaches at the University of Washington, "something about how and why books are taught in American classrooms, and about the way pedagogical intentions can shape critical taste". Would a teacher in a British university be able to say as much, either on the specific title or on the general inference?

Sale suggests that the American admiration for Ford is often taken by the English "as a sign that Americans are sentimental Anglophiles when it comes to good soldiers and the Last English Tory". It is pertinent to remark that Sondra Stang's contributors include a number of Americans with Southern connections, and outstandingly three members of the Fugitive Movement, Allen Tate, Andrew Lytle, and Caroline Gordon, the first two, of course, prominent Southern Agrarians. Seeing Ford as "at the center of international literary life for some thirty years" Tate discusses his influence on the main tradition of fiction in which Joyce, "a greater writer than Ford, represents by comparison more a restricted practice". For Lytle, though, in what he ambiguously calls "A Partial Reading of *Parade's End*", what matters is "the resistance and being 'ruined by those powers which bring to an end an ancient Tory's idea of England'. Lytle's definition of these as "industrialism, scientism, and international finance" which "separate man from nature" is a direct echo of *I'll Take My Stand*.

This side of Ford - and again it can be too easily sentimentalized - is unlikely to commend itself to the present-day British intellectual much more than to his predecessors. Ford thought of himself as a Tory revolutionary; thus his 1909 novel, *The Inheritors*, written in collaboration with Conrad, opposes at one and the same time imperialism, authoritarian bureaucracy, domestic social reform, and the proletariat, advocating instead an apolitical aesthetic retreat into individualism, thereby isolating himself from Tories and revolutionaries alike. Brought up, as he said he was, in the back rooms and nurseries of Pre-Raphaelitism, he seems at this point to have imbibed more of the Pre-Raphaelitism of Rossetti than of his own maternal grandfather Ford Madox Brown - at least, the Brown of "Work". Ford published monographs on both these painters and on the Brotherhood in which he strode regularly through the London of the nineties.

If we are interested in the collapse of "culture", leached Europe before the War we have been taught to turn to *Heartbreak House* (in the preface to which Shaw used the phrase), C. F. Masterman's *The Condition of England*, to Wells's social novels such as *The New Machiavelli* or to Forster's *Howards End*, all in their own ways more revolutionary than Tory. Yet there is no inherent reason why the non-Tories should have the monopoly of good literature, any more than why the devil should have all the good tunes, but, as Robert Green describes *The Inheritors*, it is hard to see Ford as the literary equivalent of General William Booth.

Robert Green's case too rests ultimately on *The Good Soldier* and *Parade's End*; the four novels of Ford's final years, for example, he finds "beyond redemption". Never-

theless, belying V. S. Pritchett's dictum, he does at least discuss them in the context of an informed reading of all the other prose and a discriminating evaluation of it. Like William Gass in *The Presence of Ford Madox Ford* he does what he can for the "Fifth Queen" trilogy, but he comes reluctantly to accept T. E. Hulme's "brash and intolerant prognosis" that there was no future for that kind of historical romance, of which Conrad also saw Ford's Tudor trilogy as the swan song which "frankly I am glad to have heard". Between 1910 and 1915, says Green, Ford's theme was "the honourable man beset by rogues" and his manner became one of "frenetic experimentation". Despite an occasional "Lawrentian inflection" the novels of those years are characterized by "a damaging lack of reality".

When the war broke out Ford was engaged on *The Good Soldier*, but he was still writing under his family name of Ford Madox Hueffer, his father having emigrated from Germany (another reason, perhaps, for the delayed British recognition of his merits?). Green is good on the ambivalence of Ford's attitude to Germanism both in his propaganda writings (L. L. Farrar, Jr treats this subject in the other volume also) and in *The Good Soldier*, on the modernism and the historical relevance of which Green is also illuminating. For Ford, of course, the war was a watershed: he enlisted in the army and suffered mentally and physically.

Neither book finds it necessary to pay much attention to Ford as a poet. This is not surprising, but when, writing on Wilfred Owen, I wanted to identify the kind of poetry that preceded his, I quoted some lines from one of Hueffer's trench poems as archetypal of what I called the "personal phase":

And the High Wood bursts and
bristles
Where the mine-clouds float
the sky...
But I'm with you up at Wyndcroft
Over Tintern on the Wye.

Scores of such lyrics of homesickness emanated from young poets serving in France in the years before the slaughter on the Somme. What is remarkable about Hueffer's poem is that when he wrote it he was not a callow youngster but a man of 42 whose marital and extra-marital experiences might have been expected to make him less sentimental, and whose literary experience, and friendship with so many avant-garde writers of the time might have made him more wary of so over-used a poetic idiom. That he was not illustrates the romanticism that still attracted him in middle age and that forms so important a part of his personality. It also shows his protean ability to reflect the spirit of the age, less critically than his successors might wish, but it reminds us at the same time of the primacy of personal relationships in his life.

The second part of *The Presence of Ford Madox Ford* establishes that presence in strongly personal terms through the reminiscences of eight people who knew him well (Tate's essay, though included in the section called "The Critical Attitude", constitutes a ninth testimony). This is reinforced by photographs, drawings, some of Ford's letters, and an unpublished story by him. From all of this Ford emerges as generous and warm-hearted, even if at times difficult and demanding. Despite his sexual adventurousness, he understood loyalty better than many of those to whom he so readily showed it, and that statement opens up yet another vista of his complex career.

Ezra Pound once called him the best literary editor England ever had, and Edward Krieger's contribution to this anthology examines his editorship of the *English Review* between 1908 and 1910 and of the *Transatlantic Review* in 1923 and 1924. (Bernard Poli, Frank McShane and others have of course covered Ford's ground more extensively though



Ford Madox Ford playing solitaire in the early 1920s, painted by Stella Bowen.

no more perceptively in their books.) For Krieger, "when it came to recognizing new talent, Ford was very nearly infallible", and the roll-call of contributors to the two Reviews confirms this. "Wherever there were creative thinkers", said Ford, "was my country" and he would have appreciated Krieger's definition of him as "a loyal citizen of the Kingdom of the Arts". Like other citizens of that kingdom, though, Ford was not a good business man and the Reviews floundered. He was also under no illusions about the enmities that loyal citizens of the Kingdom of the Arts can make. He told Gertrude Stein in 1924, "I really exist as a sort of half-way house between nonpublishable youth and real money - a sort of green baize swing door that every one kicks on entering and on leaving". Like Gertrude Stein, he was to be savagely kicked by Hemingway, whom both had befriended, but if, like Hemingway, Ford is not always the most reliable of witnesses in his versions of his own exploits, he seems at least to have been the bigger man in spirit.

Like many of his contemporaries, Ford was to find, in Green's words, that "what, for all its horror, had been an educative, humanising experience... sharpening rather than dulling his sense of social contradictions". It was after the war that he changed his name to "Ford", but against the chauvinism that this might imply has to be set his emigration to France and his impatience with the pressures towards conformity that, he said, made the writer in England feel like "a tin of jellied eels that has for years reposed on a country grocer's shelves". Out of this was to come the trilogy (or the tetralogy, according to your point of view) that constitutes *Parade's End* in which, Ford claimed, he "wanted the Novelist to appear in his really proud position as historian of his own time. Proust being dead, I could see no one who was doing that". How far he succeeded is a matter for each reader to determine, helped by books such as these two, but the invocation of Proust is not to be taken as Fordian braggadocio. *The Good Soldier* was called by Robert Lowell "the best French novel in the language", others have linked Ford to Flaubert, and the cosmopolitanism

that this tri-lingual novelist brought to English writing is indisputable. His importance as a theorist of modern fiction is well handled by Green, as well as by C. H. Sisson and William H. Fritchard in the other book.

Unpleasant as a writer Ford may be, to have published some sixty books in so many different genres and not to be uneven is hardly to be expected. Green's book leaves the impression that the prose is more enduring than the politics, but in linking both he moves critical discussion out of the arena of aesthetic form. Yet the enigmas remain. Ford was clearly more than mere "jellied eel" or "green baize swing door" but just how much more? Green may prompt a British reevaluation of Ford, or Ford may be right in saying "Nothing will make the Englishman adopt a critical attitude". Was Ford's influence on the novel more direct than indirect, and if so, how great was it? Is he more usefully discussed as a European, or even an international novelist than as English? Are we sometimes too genre-bound in our critical approach, and ought we now to concentrate on Ford less as a novelist and more as a man of letters working in a wide variety of media? If so, Green is steering us in the right direction - but we could go further.

If a resolution is sought to the enigma of Ford's personality we might take Allen Tate's advice and approach Ford "as a character in a novel, and that novel a novel by Ford", but if we do, we must remember that Ford as a novelist justified his own impressionistic method with the statement "... I don't really deal in facts... I try to give you what I see to be the spirit". On the spirit of Ford the verdict can rest with two of his friends. D. H. Lawrence: "Hueffer... was very kind to me, and was the first man I ever met who had a real and a true feeling for literature". Robert Lowell: "Ford; you were a kind man and you died in want". There are worse ways in which to be remembered.

Dennis Welland is professor of American literature at the University of Manchester.

BOOKS

Power and freedom

Radical Principles: reflections of an unconstructed democrat by Michael Walzer
Basic Books, £7.95
ISBN 0 465 06824 3

Some radicals are what you might call reflex - "knee-jerk" - radicals, some what you might (kindly) call scientific socialists; others, more modestly, hope to operate in a more consistent and reflective fashion than the former, yet don't claim to be in possession of the scientific key to all social mysteries. It's to this band of radicals of the middle range that Michael Walzer reckons to belong - he has principles rather than theories or reflexes. But if his principles are neither terribly grand nor terribly surprising, they are consistent, humane and rational, and it really is something of an intellectual treat to read these essays on American politics in the past two decades by someone so unswayed by immediate fashion and so undaunted by, for instance, the rise and fall of the campus left, the flight of social theorists into lamentations for the moral collapse of late capitalism, or the resistent rise of Ronald Reagan.

The sort of thing which will give pleasure to political sociologists - or perhaps to historians even more than to social scientists - is well represented by an essay on "The Social Origins of Conservative Politics", written in the immediate aftermath of Goldwater's catastrophic defeat in 1964. Walzer demurs from the then popular view that conservatism was a revolt against the modern world by people who were essentially failures by modern standards; to him conservatives looked like people who'd made themselves prosperous by hard work and self-discipline, who'd behaved in an impeccably modern fashion by uprooting themselves from their traditional homes and occupations, and simply didn't see why they should be taxed to death to support feeble types who wouldn't do the same. But in the late 1970s, Walzer's 1964 Walzer, this constituency is quite likely to start winning national elections.

What's perhaps most interesting to British readers, though, is the light these essays cast on American liberalism, or, if you like, American democratic socialism. Walzer's view throughout is that there are two goals to be pursued simultaneously, if a bit uneasily; the first, which is a long-term but not an ultimate goal is to integrate everyone in need into the welfare state. How the welfare state is to be run, and just what it is to provide, isn't tackled in detail - though there is a nice defence of the most efficient pieces of political decentralization we've got so far - but that's because the underlying point of the argument is to suggest that even when we've made the welfare state work, we have another goal to achieve. This second goal is, roughly, what picks out socialists from capitalist reformers, and it has to do with restoring something akin to the sense of citizenship which was the pride of the ancient republics, and which in America is still represented by the tradition of the town meeting.

The welfare state, in current understandings, cannot get further than trying to make available more widely and more humanely the consumption opportunities and the freedom of choice the most prosperous enjoy without its aid. This is no small thing, and it is a real increase in freedom. All the same, it is no way to integrate people into their society - what it allows is comfortable external association, and it certainly doesn't do anything to help people give any meaning to their lives. Self-government in politics and industry and everywhere else is socialism's contribution to life. The case is made out extremely neatly in more than one essay, of which one on "Town Meetings and Workers

Control" is an especially elegant defence of the view that ownership doesn't automatically bring with it all the prerogatives it happens to under capitalism.

Walzer is enough of a sceptic, enough of an individual, enough of an unconstructed liberal, to see that life wouldn't be much fun if all of it went on deciding what to do - Marx's free men would never have time to hunt in the morning, fish in the afternoon and play critic in the evening, since it would take for ever for "many-sided" men to work out how to organize it without anyone's many-sidedness being threatened. The moral he draws has a certain relevance here at present - we must just accept a division between more and less active citizens in any conceivable state, militants must exercise a measure of self-restraint and the idle a measure of self-discipline.

Oscar Wilde's dictum that what's wrong with socialism is that it takes up too many evenings is to be taken seriously; if we want the enthusiasm of Periclean Athens we want it without too much of a threat to private life.

Alan Ryan

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Styles of imperialism

Britain, Egypt and the Middle East: Imperial policy in the aftermath of war 1918-1922

by John Darwin
Macmillan, £20.00
ISBN 0 333 27073 8
Britain's Moment in the Middle East 1914-1971, second edition by Elizabeth Monroe
Chatto & Windus, £9.50
ISBN 0 7011 2555 1
The Charter of Israel: Britain, America and the State of Israel by Harold Wilson
Weidenfeld & Nicolson, £14.95
ISBN 0 7181 2002 7

In very different ways, these three books discuss Britain's involvement with the Middle East in the period after 1914.

Basing his study substantially on Foreign Office and Cabinet Papers, and the private papers of a wide variety of individuals, Dr Darwin has charted the responses of British policy makers to the new imperial circumstances facing the coalition government from the end of the First World War until 1922. Miss Monroe, in a welcome second edition of her wise and measured book published nearly twenty years ago, analyses British policy in the Middle East as a whole until the Suez debacle, while Sir Harold Wilson offers a history of Zionism, of the British mandate in Palestine, and the relations of Britain and the United States with Israel in the crises of 1956, 1967 and 1973, based on *Hansard* and his own records of the parts of his story in which he was personally involved.

Dr Darwin's thoughtful book is much more than an account of Britain's Middle Eastern policy in five crucial years. It is an appraisal of the changes in imperial style during this period, and of the variety of external and domestic pressures confronting policy-makers in their attempts to adjust to the new conditions of the postwar world. "Both in India and Egypt", as Dr Darwin remarks, "the government had to decide how far it was willing to appease nationalist movements whose cooperation was deemed vital by its proconsular subordinates". How far was the coalition government prepared to defend its concept of Britain's interests, and more importantly, how much was it prepared to spend on doing so, especially as it was becoming increasingly difficult to explain, both in and out of Parliament, how the spending of millions of pounds and the stationing of thousands of men in Egypt and Iraq could be contributing to the building of homes fit for heroes.

Darwin's treatment of the course and form of retrenchment is particularly illuminating, as is his constant reminder of the prominence of the

land in British policies of the day. One minor defect of the book is the author's failure to take adequately into account the role of civil servants - and "pro-consuls" - in the formulation of policy. Consider, for example, the immense influence of Sir Percy Cox on Curzon's attitudes towards both Iran and Iraq, or the contribution of both Sir Arthur Hirtzel and Sir John Shuckburgh to the formulation of Middle Eastern policy. Shuckburgh, for example, whom Darwin does not mention, went in 1921 from the Political Department of the India Office (where he had had substantial experience of Mesopotamian affairs) to become head of Churchill's new Middle East Department at the Colonial Office, a post which he was to hold until 1932, with overall responsibility for the day-to-day affairs of all the Middle Eastern mandates. Also, there is rather too little emphasis on the role of the United States in constraining Britain in the Middle East; oil, which Darwin discusses well, was not the only cause of friction in Anglo-Franco-American relations.

Finally, British claims that Mosul was "essential to the security of the viability of the Iraq state" (page 265) need re-examining in the light of Sir Henry Dobb's revealing statement in 1924 that "the Northern frontier of Iraq is so essentially indefensible against Turkey by any force that Iraq will always have to trust mainly to diplomatic means to defend itself against the former". But these are minor points in a wide-ranging and stimulating book.

Britain's Moment in the Middle East is already a classic. It offers a clear and unapologetic account of the expansion and contraction of Britain's Middle Eastern empire, with fascinating glimpses into the workings of the imperial mind, and in particular into the accommodations and compromises it was able to perform. Occasionally Miss Monroe seems a little too generous: although it is true that "The mandatory undertakings... were not the same thing as old-style colonialism" (page 71) and that the formal structures were indeed quite different, the political and economic elements were very much the same; here Balfour's often quoted comment that "No State can be described as really independent which has habitually and normally to follow foreign advice supported, if the worst comes to the worst, by troops, aeroplanes, and tanks", which dates from September 1919, is remarkably prescient. In the same vein, although the Permanent Mandates Commission could and did rebuke the various mandatory powers, their capacity to influence the course of events in the mandated territories was extremely limited, as the French administrators in Syria seem to have been well aware.

Miss Monroe leads the reader through the maze of conflicting undertakings entered into during the First World War, and the consequences in the years that followed; and her assessment of Britain's Egyptian policies is clear and concise. It is understandable that authors both before and after Miss Monroe have been at pains to point out, after careful study of the primary sources, that these undertakings were not in fact contradictory, but this conclusion is far less significant than the widely held belief that they were.

Perhaps the most valuable feature of this book, however, which has enabled it to stand the test of time and to continue to have important implications for our understanding of attitudes towards Middle Easterners and Middle Easterners towards Britain, is Chapter Five, "The Spectrum of Middle East Resistance", although now superseded in the sense that many detailed studies based on primary materials have appeared since it was written, it is still the best introduction to the general topic of the response to British penetration in the area in the interwar period. And even in 1981, how instantly accurate is the sentence: "British paramountcy endured until the end of the Second World War, and for longer in Middle Eastern imaginations; the shadow of power is long, and remains after the substance has gone" (page 81).

Apart from a short epilogue, Miss Monroe ends her story in 1956, with an analysis of Suez, an episode to which Sir Harold Wilson devotes nearly ninety pages of his book. It is interesting to compare the two accounts, although Wilson, as a member of the Shadow Cabinet, had no inside knowledge of events. In a revealing footnote on page 244 he explains that in times of national emergency it is normal practice for the Opposition to take the Leader of the Opposition into his confidence; "In 1956 nothing was communicated by the Government to the Labour Front Bench beyond what was known to Parliament as a whole, and to the general public". Miss Monroe gives the bare bones of the story in her penultimate chapter, and points to the extraordinary lacunae in Eden's own memoirs.

He never mentions that Nasser ran the Suez Canal without a hitch to world shipping - a piece of information essential to an understanding of the world-wide dimensions of support for international management - [but his account] displays the habit of authority, the resentment at the intrusion of a power greater than Britain's, the underestimation of local nationalism and the distaste for Egypt that coloured British action all along (page 204-5).

Sir Harold Wilson's account is more directly engaged, and contains long quotations of the speeches of the leading parliamentarians. Gaitskell comes out extremely creditably, in spite, as Wilson remarks, of his known partisanship for Israel. Wilson himself makes his own distaste for this extraordinary venture perfectly clear. We shall have to wait for a few more years before the records are opened, but it is highly probable that they will provide yet another object lesson of the dangers inherent in the over-concentration of power, since Eden, Lloyd and Macmillan acted almost alone, and certainly either without or against the advice of their civil servants. There was no machinery to make them more accountable, and even Gaitskell's extensive probing could not reveal the full lunacy of their designs.

Less satisfactory, of course, are the early sections which take the story up to 1948. In the last sentence of his preface Wilson reveals that the origins of his support for the Zionist cause can be traced to a combination of early religious instruction and admiration for the "courage and tenacity of the Israelis". It is not altogether naive to suppose that Balfour's attitude towards Zionism and Palestine stemmed at least partially from a genuine belief that Britain's acquisition of control over the Holy Land had presented him and his colleagues with a unique opportunity to begin to right some of the wrongs perpetrated against the Jews for the previous two millennia; equally, it is uncharitable and probably unjust to deny that Balfour's successors in government at the end of the 1940s, Wilson himself among them, felt even more profoundly conscious of the moral debt that they owed to the survivors of the holocaust. The plain truth, however, which emerged very soon after Britain's assumption of the mandate, was that Palestine was not and never had been a land without a people waiting for a people without a land; Richard Crossman's comment on his experience in negotiations with Truman in 1948 summarizes an important defect in Wilson's book: "As an Englishman, I was surprised and irritated during the Washington hearings by the almost complete disregard of the Arab case."

This is quoted in a penetrating article by Miss Monroe entitled "Mr Benin's Arab Policy" (in *Sir Anthony's Papers*, number 11, 1961) which Sir Harold does not seem to have consulted. Indeed, in contrast to Miss Monroe's even and spacious style, Sir Harold's account frequently seems at odds with itself; the confident Gentle Zionism of the early chapters gives way to some intriguing speculation at odds with the state of Israeli politics in June 1980 must have taken even firmer root in the wake of the recent appearance of a yet more blinkered and relentlessly right-wing government in Israel.

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US missile explosions

Politics and Force Levels: the strategic missile program of the Kennedy administration by Desmond Ball
University of California Press, £16.50
ISBN 0 520 03698 0

When he resigned as America's Secretary of Defense in 1967, Robert McNamara admitted that the United States had acquired an unnecessary large strategic deterrent. In a timely and important book, Desmond Ball seeks to explain what led to this state of affairs, maintaining that lessons could be learnt from the early 1960s by those who are considering the deployment of the next generation of American strategic nuclear weapons.

In his analysis of the Kennedy missile programme, Ball eschews the "bureaucratic politics" approach so favoured by many American commentators. Instead he uses a wide array of source material, including the oral testimony of some fifty former senior officers and civilian advisers, to explain the complex relationship between the President, McNamara, their aides, the military, and both Houses of Congress.

The book is immensely detailed and meticulously researched. It is fluently written, focuses on the central issues, and adds to our understanding of the weapon procurement process in the United States. Above all, it demolishes several myths and misconceptions about the development of American strategic politics and postures in a period of rapid technological change.

Ball refutes the theory, fostered by McNamara in his memoirs and all reflected in some polemical writings of an action-reaction phenomenon, fuelling the arms race. The Kennedy administration did not expand the US missile programme merely to offset the existing or projected missile programmes of the Soviet Union. Indeed it knew by the autumn of 1961, at the latest, that the "silo gap" between the United States and the Soviet Union, which Kennedy had exploited throughout the election campaign of 1960, was a nonsense. The subsequent missile expansion was fuelled by political, economic, and bureaucratic considerations; it was not derived from strategic calculations.

As Ball reveals, the missile programme was expanded in a hasty and ill-considered manner. It was accelerated to dramatize the shift away from the myth-criticized policies of the Eisenhower Administration, to ease the economic recession by additional defence spending, and to ensure the compliance and support of the US Air Force. Criteria of cost-effectiveness were used to choose between the various missile options and to determine the appropriate mix of systems.

Of much less importance were the National Intelligence Estimates and the strategic policies of the 1960s. Counterforce targeting and its subsequent replacement - the strategy of assured destruction and damage limitation - largely rationalized deployment decisions. Strategic writing was only significant in so far as it created a concern about, and a desire to maintain, American strategic superiority - an objective shared by the armed services, industry, and the majority of US Senators - but it was never decisive in shaping the procurement decisions.

Whether this book will contribute to the current debate about US strategic nuclear forces is doubtful. Although contemporary concerns are reminiscent of those of the early 1960s, and Reagan, like Kennedy, is burdened by campaign pledges to bolster the US deterrent, the two administrations differ in economic philosophy. Nevertheless, the immediate priorities of nuclear weapons programme without undue haste, the present administration may have learnt one lesson, however unwittingly, from the mistakes of the 1960s.

E. M. Spiers

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BOOKS

Unending dialectic

The Naked Man: introduction to a science of mythology, volume four by Claude Lévi-Strauss
translated by John and Doreen Weightman
Jonathan Cape, £17.50
ISBN 0 224 01535 4

Now that, thank God, structuralist anthropology has ceased to be trendy, we may at last hope for an objective evaluation of the work of Claude Lévi-Strauss. The appearance of this excellent English translation of *L'Homme nu*, the fourth and final volume in the *Mythologiques* series, could well provoke, in the anglophone world, that long-overdue settlement of intellectual accounts with the most influential thinker in anthropology since James George Frazer.

The *Naked Man* pursues several distinct though related objectives. First, it undertakes a further extensive dissection of the anatomy of mythical thought, bringing the total number of distinct myths analysed through the four weighty volumes to more than 800, many of them appearing in several variant versions. Although the suggested achievement may smack of theoretical overkill, it could also be argued that this relentless accumulation of cases has been necessary to establish the scientific credentials of Lévi-Strauss's theory of myth. Anyone sufficiently persevering to follow the Master through this long and repetitive process of exposition will hardly avoid taking the point, first made in *Le Cru et le Cuit* ("The Raw and the Cooked") about the "interminable" character of mythical thought. Here indeed is an apparently unending dialectical movement, forever generating new conceptual "myths" (oppositions?), postulating similarities (or analogies), and throwing up contraries and inverses.

Secondly, the author greatly extends the range of his inquiry in this book, moving back and forth between the forest-dwelling Amerindians of South America, and those of the temperate north-west of North America. His aim in bringing together the myths from peoples separated by thousands of miles in space and, presumably, thousands of years in time, is to establish a relation of isomorphism between the two specific clusters of myths: the grand cycle of Amazonian narratives organizes around the theme of the male Rindometer and a corresponding cycle of North American myths concerned with a bird-natured woman ("the all too Cooked"), Lévi-Strauss is able to show that, allowing for ecological differences between the two cultures (salt in the cold north-west assumes the functional significance of honey in the forest tale), the myths of North and South do indeed constitute a single transformation group.

For the tropical "raw and cooked" for the northern myths substitute the opposition between nudity and being clothed; and in the trade-conscious world of barter or exchange, foodstuffs are functionally equivalent to the Amazonian metaphor of cooking as representative of the transition from wild to civilized.

Establishment of the structural continuity between these two widely separated centres of New World mythology is of cardinal importance for Lévi-Strauss's third objective in *The Naked Man*: vindication of his claim of a vastly expanded and paradigmatically transformed social science of myth. In the enduring quality of the mythical system, he has discovered and mapped in the *Mythologiques* the Columbus of the mind sees the final proof of his long-held contention, which goes back to *Tristes Tropiques* and *La Pensée sauvage*, that the proper object of social science is the dissection of Man as a philosopher of his abstracted remains in an over-arching account of "man-in-anime".

In the majestic concluding chapter of this book, aptly entitled "Finale", Lévi-Strauss is at his luminous best (or obfuscatory worst, according to taste), setting about his critics, both anthropological and philosophical, with zealous malice while sketching, in a succession of dazzling strokes, the reciprocal relations of four major modes of human self-expression: mathematics, natural language, myth, and music. The special characteristics of myth have, according to Lévi-Strauss, been divided in the modern age between music, first of all in the highly structured form of the fugue, and the novel. "We thus arrive at a better understanding of the complementary natures of music and the novel... the former consists of formal constructions which are always looking for a meaning, and the latter of a meaning tending towards plurality... With the death of myth, music becomes mythical in the same way as works of art, with the death of religion, are no longer merely beautiful but become sacred." (page 653). Those disposed to a Popperian view of social science will, as always, be baffled and infuriated by these passages which so artfully blend poetic intuition, wit and invention. Those hoping to find here a concise and coherent statement of "what structuralism is all about" will, again as always, be disappointed. (Piguet is the man for that). But the rest of us will feel free to revel in the splendid audacity of a mind bold enough to pose and discuss the grand questions that any anthropology worthy of the name must eventually address.

The complex and allusive character of Lévi-Straussian French is notoriously difficult to render in a foreign tongue. Translators John and Doreen Weightman have performed their arduous task with consummate skill and sensitivity. I would, though, have liked just one more of their discreet and useful footnotes: I am still trying to discover the definition of a "Poliphar transformation", frequently alluded to in the text but never explained.

Roy Willis

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Kant's idealism

Kant and the Transcendental Object: a hermeneutic study by J. N. Findlay
Clarendon Press: Oxford University Press, £17.50
ISBN 0 19 824638 2

Without doubt the most influential book on Kant's philosophy in this generation has been Peter Strawson's *The Bounds of Sense* (1966). But for all its many virtues and depths of thought, *The Bounds of Sense* suffers from one major defect: it expices Kant's transcendental idealism from the rest of his critical philosophy. This must produce a seriously distorted interpretation, for it omits what Kant correctly thought to be his most important contribution to philosophy, that which makes his "Copernican revolution" possible. Kant emphasized both that the mind actively organizes experience, even though it seems to be simply presented to us, and that our experience of the external world is, ultimately, the result of some sort of interaction between transcendental objects, knowledge of which is necessarily inaccessible to us. In a careful study of the metaphysics of transcendental idealism, Strawson dismissed both these features of Kantian philosophy, focusing his activity but on the necessary features the world must have if it is to be a possible object of experience. Any speculation about what lies beyond possible knowledge must, Strawson argued in a professedly Kantian spirit, be empty.

Ralph Walker, in his recent book *Kant* (1978), began to restore the balance, arguing persuasively for the significance of transcendental idealism. Now J. N. Findlay has presented us with a full-length study of the transcendental object and the



The illustrated music cover of "Quite Too Utterly Utter", a roundelay satirizing the aesthetic movement, taken from the Victoria and Albert Museum's publication Victorian Illustrated Music Sheets (HMSO, £1.95).

noumenal world in Kant's critical philosophy. As Findlay says, "This book is an attempt to conduct a comprehensive examination of Kant's metaphysics of transcendental idealism, which is everywhere presupposed by his critical theory of knowledge, his theory of the moral and the aesthetic judgment and his rational approach to religion." (vi). I agree with his assessment and believe that Findlay's book is a valuable contribution to Kantian interpretation. (And not just in the English-speaking world: *The Bounds of Sense* is standardly used by German university students).

The book professes to be a "hermeneutic study". As such it summarizes Kant's major argument in all areas of his philosophy in such a way that the role of the transcendental world is highlighted. This approach will be especially valuable for a reader relatively unfamiliar with Kant's philosophy, for whom it can serve as a comprehensive introduction, but it will also be useful for one who has not been able to see how Kant's transcendental idealism pervades his philosophy. However, the summary method does engender a few weaknesses of the book: some of the central obscurities in Kant's transcendental idealism are not examined from a sufficient distance. For example, one would like to know much more than one is told about the relation between the noumenal self as it is presented in the *Critique of Pure Reason* and as it is presented in the *Critique of Practical Reason*.

That being said, this is a book of erudition and good judgment. Two chapters deserve special mention. One of these, on the historical background of Kant's philosophy, analyzes the ground of Kant's philosophy, the German metaphysics of Christian Wolff and Christian August Crusius. It is a mistake to think of critical philosophy springing *ex nihilo* from the mind of Kant awakened from his dogmatic slumbers by Humean scepticism. It does not diminish Kant's originality or genius to place critical philosophy within the context of eighteenth-century German metaphysics.

The other is a fascinating chapter on the role of the Newtonian world of forces in space and time in Kant's critical philosophy. Certainly its role is not obvious. If the world as it is in itself is unknowable and the phenomenal world is just the ordinary world of tables and chairs, where is there room for the world as described by science? This problem could not be lost on contemporary scientific realists who wish to substi-

tute the knowable world of science for the Kantian noumenal world. Kant's solution, by contrast, is to distinguish between primary and secondary appearances. The ordinary world of tables and chairs is treated as an appearance of an appearance. Thus although Kant said that we could have no knowledge of the nature of the impact of the noumenal world upon us, he does drop hints as to how he conceived it.

Jonathan Lear

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Rules of the game

The Language Myth by Roy Harris
Duckworth, £18.00
ISBN 0 7156 1528 9

The language myth is... well, what, exactly? In a book which often alludes to arguments rather than stating them explicitly it is not always easy to identify the author's target, and in fact Harris's title seems to refer to two separate assumptions about language.

On the one hand there is the myth that a language is a fixed code providing for a perhaps infinitely numerous, but nevertheless determinate, terms - a system comparable to the game of chess, to extend Saussure's analogy, in which the legal moves are easily defined even though there is an almost endless variety of situations that can arise on the board. Harris, by contrast, urges us to view language as "a communication game in which there is no referee, and the only rule that cannot be bent says that players shall improvise as best they can". On the other hand there is the myth that a language has something called "grammar" which can usefully be discussed in isolation from the communicative purposes to which language is put.

Harris seems to regard these two aspects of the same idea, but surely they are very different? The question whether we modify the rules of language creatively is independent of the question whether an analysis of those rules must be conducted in "communicative" terms. Harris's

second "myth" is neither an original target for attack, nor does it seem to me to be a myth. It is ten years since Dell Hymes published *On Communicative Competence*. By now the notion that generative grammarians' analyses are pointless because they ignore the purposes of speech has attained the status of fashionable shibboleth; yet it has never been shown how bringing in "communicative" can in fact help us to say more clearly or accurately which arrangements of words are sentences and which are not. If a Frenchman does not know how to put *eat* into the perfect continuous, no amount of reflection on his rhetorical goals or his social situation will teach him to produce the form *has been eating*.

The point about creativity is potentially more valuable, since few linguists to this day are prepared to question the determinateness of the linguistic code - though Harris really ought to refer to Charles Hockett's book *The State of the Art* (1968), which made exactly Harris's point about language being a game in which we improvise the rules. I am sympathetic to Harris's case here; but he never really argues it. What he does argue is that twentieth-century linguists have persuaded themselves of the determinateness of linguistic structure through a series of examples of fallacious reasoning; but this part of his exposition verges on travesty of the recent history of linguistics. He refers to Y.-R. Chao's demonstration that languages can have alternative equally elegant phonemic analyses, and claims that the only problem linguists saw in this was that of how to determine which the alternatives is psychologically real. He complains that linguists pretend to establish their analyses scientifically while actually reading into utterances traditional grammatical categories whose validity they take for granted; many will agree with this criticism as applied to the Chomskyan school, but Harris specifically applies it to the descriptive linguists of the 1950s and before, ignoring the painstaking work of men such as C. C. Fries or Zellig Harris on just the problems which he claims were skated over.

A persuasive argument for creative linguistic improvisation, surely, would involve careful analysis of particular examples; one would need to show grammatical constructions being extended in multifarious and unpredictable ways, rather as Wittgenstein suggested the sense of *game* has been extended in ways that fall under no general principle. But when Harris descends to examples, he is insensitive to the nuances of language. Thus, a substantial portion of his discussion rests on the claim that no fact about the grammar or semantics of the word *dealer* can explain why we do not call newsagents *newspaper dealers*, since to deal is to do business and newsagents do business in newspapers. But to deal usually implies making judgments about prices and goods - an antique dealer or a dealer because it is not obvious which pieces he should buy or how much he should sell them for. People who trade in old newspapers as collectors' items might well be called *newspaper dealers*, but it is entirely predictable from the meaning of the word that it cannot apply to retailers whose selling prices are printed on their wares.

Harris's book is unappealing ultimately because it is relentlessly negative. Theory after theory and scholar after scholar are introduced only to be immediately dismissed with a brief allusion to an obviously fatal flaw, until one wonders how Harris can bear to read the literature of the subject he professes when it is apparently so unbelievably inadequate. At one point Charles Hockett is mentioned; here, surely, is someone for whom Harris must have a good word to say? Not so, Hockett gets a short shrift as the rest. Would Harris feel that he had failed if he had to agree with something someone else had said? His book suggests that. Perhaps as an inevitable result, it leaves the reader intellectually unmoved.

Geoffrey Sampson

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BOOKS

Chapel and union

The North Wales Quarrymen
1874-1922
by R. Merlyn Jones
University of Wales Press, £14.95
ISBN 0 7083 0776 0

This scholarly book belongs to a category of historical writing - the detailed case-study drawn from a doctorate - which has become commonplace in the universities. It is not an undeniably enhanced growing reputation of the "Studies in Welsh History" series. By any standard this is one of the best of recent works examining the experience of important groups of Victorian (and early twentieth-century) workmen.

As the modern tourist to North Wales knows, the areas around Bethesda, Llanberis and Blaenau Ffestiniog contain the stark remains of the greatest slate quarries in the world. The workforce responsible for these huge man-made craters, and for producing an impressive percentage of the globe's roofing slate, was remarkable on many counts. First it was intensely Welsh. There were few immigrants into the industry save hanted English or Scottish managers. Until the twentieth century the quarrymen were monoglots who kept their union records and lived their daily lives in Welsh. Nonconformists to a man, they saw their industrial disputes in Old Testament terms. The chapel was not merely their house of worship; it was a badge of cultural identity, community solidarity and an agency of social organization. Typically it stoked more fire in the belly of strikers than could the union lodge.

It is interesting that Dr Jones attributes the comparative failure in the quarry districts of the great Welsh revival of 1904-05 to the collapse of resistance to the Penryn lockout (1900-03). Though they purged those who capitulated, the chapel came to sense that they had themselves somehow failed God in not being able to ensure victory. The privations of the strikers were borne as a religious and cultural purification. Those who faltered were deemed traitors, less to their "class", than to their culture. The author's analysis of this close-knit, intense, often self-righteous, yet always fascinating community of workmen is perceptive, well-balanced and entirely absorbing.

The villains similarly represented more than just "capitalism". Most quarry-owners were foreigners (mainly of Lancastrian extraction), unversed in *yr hen iaith*, Anglican in religion and, most notably in the case of the Pennants or Assheton-Smiths, landlords. It was axiomatic to the quarryman that just as his Welsh land had been filched by English invaders, so his individualistic method of work organization was under siege from ignorant managers who aimed gradually to invest him with inappropriate factory discipline and so reduce his independent status (as he saw it) to the role of wage slave. It is of course a story finding echoes among other groups of Victorian workmen. But here, every grievance, was also charged with the whole emotional gamut of Welsh politics: the struggle against alien landlordism, Toryism, and Church Establishment. It was essentially the soil from which Lloyd George sprang.

Given the pent-up bitterness of a *Kaliyampi*, one might have expected the men's union (The North Wales Quarrymen's Union) to be enormously militant. In fact for much of the period it was quiescent. For the first twenty years from its foundation (1874) it was a reflection of Welsh provincial bourgeois attitudes, another weapon of the Nonconformist middle class to discount Tory landlordism. The early leaders were scarcely workmen at all and in a sense used industrial grievances to advance the Welsh version of radical Liberalism. Only after 1908 and the reforming energies of R. T. Jones did a slow flirtation with socialism begin. For

much of the period the union was overshadowed in offering both welfare provision and cultural cohesion by the chapel and the *caban*, the remarkable institution created by the quarrymen which served as *estafod*, friendly society, education club and lunchtime concert rolled into one. Fortunately the author realizes that the history of any workforce is infinitely richer than that of its trade union and he never lapses into the blow-by-blow account whose tedium besets many straight trade union histories. Dr Jones has given us a well-written and meticulously researched study which deserves a wide readership on both sides of Offa's Dyke.

Baron F. Duckham

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Medieval learning

From the Circle of Alcuin to the School of Auxerre: logic, theology and philosophy in the early Middle Ages
by John Marenbon
Cambridge University Press, £22.50
ISBN 0 521 23428 X

The first stirrings of western medieval thought have about them something of the air of science fiction. The displaying of the rediscovered rudiments of the intellectual heritage of a lost civilization, expressed in ancient and often unknown languages, became part of the Roman imperial ideal, embodied in the coronation of Charlemagne in the year 800 AD.

Central to this rediscovery is the logical thread emanating from the neo-platonic Porphyry, from Boethius, and (allegedly) from Augustine of Hippo - a thread which, as this book shows, is to play a great part in early medieval philosophy and theology. Alcuin of York (730-804) provided the Anglo-Saxon impulse through which passed the ancient learning, and which shaped the Carolingian revival. Italians, Spaniards and Irishmen also contributed to the French enterprise which, it has been said, came to ultimate fruition in the foundation of the University of Paris. Grammar, rhetoric, and dialectic, the so-called *trivium*, were the basic "liberal arts", with dialectic finally becoming the ultimate peak of learning in this period, at least outside theology. This explains the prominence of the history of logic in Dr Marenbon's book.

Copied to Charlemagne's court, Alcuin provided the intellectual content for the emperor's power-backed directives concerning the establishment of learning. Although universally credited with the genius behind this impulse, Alcuin has hitherto tended to receive less praise for his actual work. Now, however, the present work somewhat enhances the Englishman's status in the respect by a thorough examination of what are known as the "Albanus Passages". Alcuin is identified as the "Albanus" of these passages, which are edited as appendix one, and receive exhaustive comment in chapter two.

Alcuin's disciple at court, and his successor as abbot of St Martin's at Tours, was that Fredegisus whose legend claimed that "Nothingness and Darkness are existing objects". The basis of this thesis is the notion (still having meaning by its own day) that names have meaning by standing for things. After an examination of this and of Fredegisus's controversy with Agobard of Lyon concerning the soul, the book passes on to its central phase, which concerns the dialectical aspects of the output of the greatest thinker of the period, John Scotus Erigena.

As his title indicates, John was an Irishman, one of many who gravitated towards France in this era. Whether or not he imported his knowledge of Greek from his native country, or whether he acquired it from Greek monks at St Denis, is still a subject of controversy. Be this as it may, there is no doubt that his immersion in Greek works, especially those attributed to Dionysius the

Areopagite, was responsible for a quite earth-shaking version of Christian neo-Platonism. The intervention of controversy concerning a World Soul into the history of the logic of universals is sketched in chapter three. This involves drawing a contrast between Erigena's thought on this matter and that of his contemporary Ratramnus of Corbie. Erigena's alloy of the logical, natural, and supernatural is also described here, with negative theology placing God outside the categories of being. The famous "divisions of nature" (uncreated creator, created creator, created non-creator, and non-created non-creator) are traced to their sources, and the use of a Platonic hyper-realist in respect of universals as a solution to the problems of original sin and redemption is described.

Erigena's personal history is fairly mysterious. One account even claims that he was murdered by the pens of his pupils at the abbey of Malmesbury. Hence any material which takes us nearer to his career is to be welcomed. L. Traube (in 1912) and his pupil E. K. Rand (from 1920 onwards) supported the exciting conjecture that the earliest remaining manuscript of one of his central works displays Erigena's own marginal additions in Irish script. Marenbon, however, puts the more sober hypothesis (chapter four) that these additions merely throw light on the ways in which his works were disseminated. The examination of this process is continued in chapter five, in which early medieval glosses (some of which are edited in appendix three) are brought to bear.

This highly scholarly work is underpinned by ample footnotes and appendices which interlock admirably with the whole range of current research in this field. Such a profound immersion in the material has dictated the choices of topics for discussion. The interpretations imposed are also avowedly oriented to sources which could lead the way towards doctrines espoused by thinkers of the time. Such readings, rather than history of logic in any less relative sense, are the pervasive result of subordination to this aim.

D. P. Henry

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Reformers' handbook

Religious Thought in the Reformation
by Bernard M. G. Reardon
Longman, £11.00 and £5.95
ISBN 0 582 49030 8 and 49031 8

Bernard Reardon is well known as a learned and interesting anthologist and interpreter of nineteenth and twentieth-century religious thought. This new work is a collected volume to his *From Coleridge to Gore*, a book which has established itself as a basic resource for students of Victorian theological developments.

The present work begins with a chapter on reform movements before the Reformation, and then goes on to deal separately with Erasmus, Luther, Zwingli, Melancthon, Calvin, the radical Reformation, and finally the Council of Trent. There are select bibliographies for each chapter, and the work as a whole is aimed at "the younger student" in search of a handbook to the theology of the principal reformers. Mr Reardon rightly points to the neglect of the theological views of the reformers by many historians of the period, and he offers here a corrective which is concerned exclusively with their thought, and provides only the minimum of historical context.

It may be felt that this procedure perpetuates the artificial and disjointed separation of so-called secular, social and specifically "religious" history which has dogged much writing about the Reformation, but with Reardon's book is certainly a useful material presented here. Much of the material presented here is not available in English - the chapter on Melancthon in particular is invaluable for this reason. The chapters on Zwingli and Calvin, too, provide excellent introductions to their subjects, that on Zwingli being particularly successful. The two chapters on the English Reformation, where issues of great complexity are sometimes presented simplistically - as in the claim that the "Constitutional Revolution" carried through by the Reformation Parliament was "almost entirely on the king's own initiative, not to say his whim". This is a possible view of the matter, but it is emphatically not the view of Professor Elton, whom Mr Reardon appears to cite in support.

In these chapters, too, there is a decidedly old-fashioned high church view of the nature of sixteenth-century Anglicanism, with Richard Hooker well to the fore, while William Perkins, a figure far more central both to the Church of England's self-awareness in the sixteenth and seventeenth centuries and to its international reputation, is not even mentioned. Archbishop John Whitgift appears here rechristened Richard, and is wholly absent from the index. There are some odd omissions from the bibliography to these chapters too, notably Professor Collinson's magisterial work on the Elizabethan Puritan movement, and Harry Porter's important and beautiful book on Reformation Cambridge.

A graver weakness than any of these points of detail, however, is Mr Reardon's basic approach to Reformation theology. It is not simply that he is out of sympathy with the enterprise of the Reformers, and in deed of their adversaries, in a preface, which savours rather of the *Essays and Reviews* liberalism of Mr Reardon's usual stamping ground, he makes it clear that he thinks the issues the reformers lived (and in some cases died) for are now irretrievably dead, of purely historical interest. Significantly Erasmus seems the only figure he visibly warms to. But more than this, it is his ahistorical approach to his thinkers which seems at times to flatten and distort his material. This is perhaps most striking in the case of Luther, who simply refuses to be squeezed into any neat systematization of his thought, such as is here attempted. More than any other theologian of the period Luther has to be read historically, for his thought was constantly developing, and his most important works were occasional, designed to meet specific needs and challenges.

The same criticism can be levelled at Mr Reardon's chapter on the Counter-Reformation. It is perfectly legitimate to focus, as he does here, on the Council of Trent as the fundamental expression of Counter-Reformation thinking, but it is vital that Trent should be seen not as the product of a monolithically homogeneous theological consensus, but as the outcome of a real and complex theological ferment. The views of crypto-Lutheran or mediating Catholic theologians like Contarini and Pole were defeated at Trent, but they contributed to the final shape of its decrees, and they have to be taken into account. Mr Reardon largely ignores this variety within the Catholic theological camp, as well as the recent work of historians like Professor Bossy on what might be called the theological anthropology of the Counter-Reformation, which has so deepened and widened our grasp of the issues involved. This chapter, indeed, like much of the book, might have been conceived twenty years ago.

Overall then, this book will be most valuable to students and general inquirers in search of a straightforward summary of the leading ideas of the main reformation thinkers. As a general introduction to the thought of the Reformation and Counter-Reformation, however, its value is more doubtful. Mr Reardon's Reformation is the Reformation as it all happened in the head, far too cut and dried, isolated both from the medieval theological background from which Reformers and Counter-Reformers alike emerged, and from the social, cultural and cultic context which made their ideas live.

Erasmus Duffy

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Fragile coalition

Britain and the Commonwealth Alliance 1918-39
by R. F. Holland
Macmillan, £20.00
ISBN 0 333 27295 1

The development of the Commonwealth of the British Empire is a subject which has recently been upon hard times. An older generation of historians wrote worthily rather dull books about it from a mainly liberal, Whig point of view, and emphasized the evolutionary continuities, the constitutional forms, and the elements of cooperation and unity within that association of very disparate states. The appearance of Commonwealth veiled the reality of the loss of empire.

R. F. Holland is a younger historian who has taken a fresh look at the subject. The underlying theme of his book is "that the organisation of Commonwealth was one way of the British state attempting to deal with the political and economic decline after 1918" (page 24). The development of the Commonwealth was thus a response to weakness, not an expression of strength (page 1).

This is to take a firmly Anglo-centric approach, but then the British Commonwealth of the interwar years was a very Anglo-centric organization. It was limited to British and the white dominions, and it lasted alongside - it did not replace - the British Empire, which reached its greatest territorial extent during this period. It was a white man's world, mainly Anglo-Saxon Commonwealth with strong racial and historical bonds underpinning the links with Britain sought by the majority of its members. This Commonwealth did not exist in 1900. It came into being under the impact of the First World War and under the influence of the experiences resulting in the Union of South Africa in 1910. It lasted for barely a generation, the changes to which it was subject after 1945 transforming it into a rather different body, though bearing the same name.

Dr Holland portrays it less in terms of the united body of autonomous nations under one crown, of liberal imperial mythology, and more as "a fragile and problematic coalition of interests which required continuous management" (page 23). In the main chapter he examines how successive British governments engaged in this exercise of management. The constitutional issues - which attracted the attention of earlier historians - are adequately dealt with and given fresh illumination by the incisive use of a wide range of both government and private papers. Both the Balfour Report of 1926 and the Statute of Westminster 1931 emerge with reduced stature. Specific problems, including those of migration, trade, investment, communications, defence and foreign policy-making are clearly and succinctly analysed. There is also an excellent chapter on the issues raised by the inclusion of the Irish Free State, with its strong republican and secessionist tendencies, within the interwar Commonwealth.

But the real strength of this book lies in the way that Dr Holland brings the economic dimension to bear on political and constitutional issues, which have too often, in the past, been studied in isolation. Further, he relates the specific problems within the political and economic, within the Commonwealth to the period. This is an admirable and a substantial achievement in a book of some 200 pages which had its origins in a PhD thesis.

This book also points the way ahead. The history of the British Empire and Commonwealth has, in the past, been too much studied and written about in isolation from the British and international history of which it is a part.

Iain R. Smith

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BOOKS

BIOLOGICAL SCIENCES

Anxious for order

Ordering the World: a history of classifying man
by David Knight
Barnett Books/André Deutsch, £7.95
ISBN 0 233 97293 5

The theme, as the author says, can be seen in two ways, as "a discussion of man the classifying animal, anxious to find some order in nature (or if necessary to impose an order there) and also a discussion of how man has fitted himself into this order. We are therefore concerned with the very fundamental questions of how mankind has perceived the world, and how it has perceived itself in that world". And he rightly turns to the eighteenth and early nineteenth centuries for the heroic age of the theme, rather than the period after the *Origin of Species*. It is pleasant to find that the activities of the early taxonomists are at last beginning to be recognized. One still finds far too often the silly dichotomy of science into physics and stamp-collecting; and however truly great the man who first used the phrase, he was a fool when he used it.

The book surveys a vast range of topics, centring on biological classification, but illuminating it, often very effectively, from chemistry, languages, the stars and nebulae, diseases, history and philosophy; and this is its particular strength. The range enables the author in his epilogue to ventilate his feelings on aggression, the Golden Age, Richard Dawkins, determinism, evolution, computers, conservation and morality. A sad number of workers make their appearance, often only in passing. With such a wealth of material, such topics as naming and the obsolescence of taxonomic names, the natural and artificial mode of classification, the classification of changing entities, and the interplay of theoretical constructs and discovered facts in a classification, are treated adequately.

Nevertheless, it cannot be said that the book is really satisfactory (apart from the large number of spelling errors). One of the major influences on the early classifiers was Aristotelian logic, yet this is hardly mentioned. The key concepts of analogy and effective identity are not adequately treated, and in consequence, the quotation from Aristotle is misleading: what Aristotle called analogies are in fact homologies.

Documentation is poor - the statement (page 169) that "a recent investigation" shows the three independent accounts of the clash between Huxley and Wilberforce "were all in fact cooked up by the same people" is a merely gossipy without proper citation of authorities, as is the statement that the X Club were "as intolerant of dilettantism, heretics or upstarts as any Inquisition" - whom did they burn or torture?

The author is not well grounded in biology or he could not laud Robert Chambers as he does. And my confidence is further undermined by the superficiality that pervades the book. For example, Erasmus Darwin's *Zoonomia* and *Phytologia* are not the same system, nor are they poems. It is not true that there are no vacant places in Linnaeus's system of plant classification (the class with eleven stamens is not vacant). Linnaeus did not provide justification for the tautologous domestic cattle *Bos bos*; his name for it is *Bos taurus*; and one cannot refer to his placing the chimpanzee in the same genus as Man without reference to the long footnote (*Systema Naturae*, tenth edition, page 24) in which he is clearly uneasy about it.

One can find only an unintentionable reference to separate them. In general, other examples could be

Again, there is no discussion, even in the epilogue, of the biological idea of species; there was plenty of recognition (for example in Ray) of species breeding true, that is, the modern idea of the biological species, and it is not now the case in biology that "we can admit that the idea of a species is loaded with a great deal of metaphysics".

Whenever the author touches on the actual practice of classification in biology his treatment is unsatisfactory. There he gives no indication of what Lamarck's ideas of the actual mechanism of evolution really were. He omits from his brief account of Louis Agassiz the practical criteria Agassiz thought he had found to justify his qualitative distinction of the taxonomic ranks. Equally, he stigmatizes E. B. Poulton as a Darwinian dogmatist without referring to his classic experiments on predators and protective coloration, which gave Poulton his scientific basis for believing in natural selection and therefore in Darwinian evolution. Because of both Poulton's and much later work it is not true that the "metaphor of natural selection" is no more than a metaphor.

Quite a number of the things the author comments on as surprising are not at all so if one knows something of the actual practice of taxonomy in the period covered. "De-tails" can make or mar a scientist scientifically and cannot be left out of a history of science. It is not enough to announce that taxonomists still "argue over the wisdom of revising genera, and hence names, too painstakingly"; one must find out what in practice it means before taking a patronizing stance.

The principal finding of the author in biological taxonomy is that it has moved from external and superficial characters, and now employs additional sources of evidence, such as chemical tests. But many external characters are not superficial, many internal and chemical ones are. The real progress is from discordant to concordant character-complexes, from theological to practical definition of the species, and from a single sort of species and speciation to many.

Although the book has many good points and can serve as a useful introduction to the topics covered, I cannot recommend it without reservation.

A. J. Cain

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Restricted behaviour

The Oxford Companion to Animal Behaviour
edited by David McFarland
Oxford University Press, £17.50
ISBN 0 19 866120 7

David McFarland's intention in this unusual and ambitious book is to introduce the scientific study of animal behaviour to the non-biologist by means of a reference work rather than a more conventional introductory textbook.

The result is a large, indeed formidable, volume, running to more than 600 double-column pages of small print, and containing some 250 articles, alphabetically arranged, on important topics in the field of animal behaviour. Some are no more than a paragraph long, but others run to several pages, and constitute impressive reviews of the subjects in question. The editor, with the help of some 70 other contributors, has produced a wide-ranging and authoritative coverage of the field.

However, readers who come to this book expecting to find accounts of the natural history of major animal groups such as the social insects, primates or whales will be disappointed. Instead, they will find a collection of articles on important concepts and types of behaviour such as aggression, communication, display, imprinting, social behaviour and territory. In addition, there are welcome discussions of topics rarely



Wood-engraving by Robert Gibbings for his essay "Thoughts on Fish", contained in *The Best of the Saturday Book*, edited by John Hadfield and published by Hutchinson at £12.95.

dealt with in standard animal behaviour textbooks, such as animal welfare, the behaviour of farm animals and pets, and the history of animal behaviour.

This is not to say that the book is free from problems. No two ethologists would agree on exactly which topics should be included in and which should be omitted from a book of this sort. Even allowing for this, however, it does seem eccentric to include fairly lengthy accounts of the non-biological aspects of time and of climate, but not on topics of intense contemporary interest such as behavioural ecology or sociobiology. Determined readers could discover a fair amount on these topics within the book, but they would have to work fairly hard to do so. They would also have to know that the articles to read included those on adaptation, fitness, field studies and natural selection.

Inevitably, the articles are of uneven quality. Many are excellent, lucidly written, informative and entertaining. Others are less successful, in some instances because the subject matter under discussion is too large to be condensed into a few pages. It is difficult, for example, to summarize the social organization of animals ranging from corals to baboons in two pages, or brain structure and function within the animal kingdom in 15, although the authors of both articles make heroic attempts to do so. There is a certain amount of overlap and repetition among different articles, and less than perfect agreement among others. For example, the article on aggression tells us that "animal societies are built up in practically all cases on a system of dominance", a statement with which many ethologists, including apparently the author of the article on social organization, would not agree.

How successfully does this book introduce animal behaviour to the non-biologist? The editor and authors have clearly made great efforts to write simply and without recourse to technical language, but many non-biologists are going to find some of these articles hard going. In several, the genuinely uninitiated reader will have to make many cross-references to unfamiliar terms explained elsewhere in the book, and this is bound to hamper progress through the article and make comprehension difficult.

Neil Chalmers

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Modern taxonomy

Plant Taxonomy and Biosystematics
by Clive A. Stace
Edward Arnold, £8.95
ISBN 0 7131 2802 X

100 Families of Flowering Plants
by M. Hickey and C. J. King
Cambridge University Press, £27.50
and £8.95
ISBN 0 521 23283 X and 29891 1

It is perhaps surprising that taxonomy and systematics (both plant and animal) have been poorly served by textbooks during most of this century, despite the basic position that the subjects still occupy in biology. In particular there has been a need for a medium-sized text in plant taxonomy to fill the gap between large detailed works such as *Principles of Angiosperm Taxonomy* (Davis and Heywood, 1963) and *Vascular Plant Systematics* (Radford et al., 1974) on the one hand and small paperbacks designed mainly for sixth-formers on the other. Stace's new book serves this purpose splendidly. It is an excellent, balanced, well written account of plant taxonomy and is divided into three main sections: the basis of plant taxonomy; sources of taxonomic information; and taxonomy in practice.

In his introduction, Stace takes up the cudgels for the recognition of

taxonomy as a challenging and exciting subject with broad horizons and far-reaching consequences. He sees taxonomists as "scientists with a key role to play in biological research, conservation and food production". Alas, few will listen to his message, as taxonomy and systematics seem to be yet again in decline in many parts of the world, including Europe and the United States, at the same time as there is increasing resistance to the financial and political demands made by the conservation and resources lobbies.

The first chapter is a workman-like account of the scope of taxonomy and defines the basic terms and concepts used, such as the hierarchy, predictivity, general and special purpose classifications. It is disappointing, however, to find that Stace has defined taxonomy in such a way as to cover systematics. Failure to distinguish between these two terms has been responsible for much confusion and misunderstanding in the past, which elsewhere in the book the author deplores.

The second chapter gives a concise account of the historical development of plant taxonomy and skillfully discusses the cases to be made for phylogenetic and phenetic systems of classification. The book was completed before the recent flurry of interest by some taxonomists in the cladistic "phylogenetic" principles of the zoologist Hennig and his disciples, which have been the source of acrimonious debate (along with related topics) in the pages of *Nature* and *Biological Journal* during the past year. Stace does mention Hennigian principles, but believes that the strong criticisms made of them by Mayr and others will predominate in the foreseeable future.

The main part of Stace's book deals with the various sources of taxonomic information: structural, chemical, chromosomal, cytogenetic, geographical, and ecological. He makes the important point that taxonomists are often unable to use the data produced by other workers such as anatomists, geneticists and chemists, because they are seldom expressed in systematic terms, are based on inadequate samples, or are otherwise deficient. It is perhaps a sign of incipient maturity of the disciplines that no exaggerated claims are entertained for the value of characters derived from chemosystematics or cytotaxonomy.

The final section of the book gives a useful survey of the actual techniques and processes used by taxonomists in practical taxonomy and of the resources (herbaria, libraries, botanic gardens, experimental grounds, and so on) available to them. The work concludes with a chapter entitled "Taxonomy in the service of man", in which Stace expresses strong views about the need for taxonomists to play a greater role in man's betterment, particularly in connexion with the compilation of an inventory of the world's plant resources, especially in the tropics where they are under increasing threat of destruction, and with the genetic conservation of resources. The only false note in this otherwise well-balanced book is the naive discussion of the desirability of a new worldwide *Species Plantarum* or inventory at a revisional level.

Hickey and King's book provides about as stark a contrast with Stace's book as one could imagine within the same general field. This is straight systematics in the traditional, indeed old-fashioned sense: an illustrated account of 100 plant families which are readily available in Great Britain. The illustrations - shaded pen-and-ink drawings of a "typical representative" of each family - were specially prepared for the book.

Brief descriptions of the families and detailed descriptions of the typical representatives, together with notes on members of economic or ornamental value comprise most of the text. Overall, the book is disappointing. Stace (page 194) refers to the belief of the early taxonomists in the importance of "essential characters" which defined the nature or essence of the organism. Hickey and King still talk of such "essential characters", so outmoded is their approach.

V. H. Heywood

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BOOKS

BIOLOGICAL SCIENCES

Peering through the keyhole

An Imagined World: a story of scientific discovery
by June Goodfield
Hutchinson, £8.95
ISBN 0 09 145480 8

Peter Medawar told us on the Third Programme that the scientific paper is a fraud. He meant not that results are cooked or that scientists don't trust what one another writes, but that publications in learned journals with their neat divisions into introduction, methods, experiments, and discussion, give a misleading impression of how scientific work is actually carried out. His advice was "peer in through the keyhole", and this is what June Goodfield does here.

Six years ago she made the acquaintance of "Anna Brito", a young experimental pathologist then engaged in research on Hodgkin's disease in New York. Through conversations, reminiscences, letters, tape-recordings and by sitting in on discussions she traces her protagonist's development as a scientist, from her training as a clinician in her native Portugal to her present position as the leader of a small research group at the Sloan-Kettering Institute, one of the great centres of cancer research in the United States. On the way Anna spent 12 years in London and Glasgow, so that we are given insight into three very different scientific communities. The style is discursive, so that we are given Anna's own midnight reflections, long and involved discussions with the author, quite detailed accounts of the science itself complete with illustrations, and a great deal of day-to-day chit-chat over the microscope in the laboratory.

This is a book about real people. "Anna" is a pseudonym for a fairly well-known scientist, and quite a large circle of her colleagues will have no difficulty in identifying her. Her immediate circle and the two senior women scientists who have had most influence on her also receive codenames, although her most recent boss appears rather confusingly within the narrative as "the director" but elsewhere as Robert Good. Eminent colleagues such as James Hirsch and Henry Kaplan drop in under their own names. In principle this convention enables an author to deal more ruthlessly with her characters, but in practice there is very little here in the way of judgment. One wishes that one could read the adverse opinions when, during the main phase of the work, the research grants keep getting refused. The characters speak for themselves, and one is left to draw one's own conclusions. At any rate, in the light of my own knowledge this is a pretty accurate account.

It is a nice idea to show the nuts and bolts of research. But the problem with this design is that it can show only one way of doing research and that not necessarily the best one. The central character has an attachment to her ideas which verges on the manic. Around her there is a group of student and postdoctoral scientists who follow up her own ideas. The book makes a distinction between thinkers and doers, and there is little opportunity for the doer to graduate to the higher category. This is partly because most of the time they seem here to be too busy accumulating data to read and think, and partly because Anna is so dominant a person, at least that is the way she comes across. I have a strong impression that in most scientific investigations there is a great deal more give-and-take within the team, coupled with a good deal more in the way of self-questioning about the best strategy.



June Goodfield

to adopt. Take the receptors for iron-binding proteins as an example. Anna wonders for a hundred pages whether iron or iron-binding proteins have receptors on lymphocytes, and if so whether this is low lymphocytes find their way round the body. One can now see, with the benefit of hindsight that the problem could be cracked by the methods and ideas of membrane biochemistry rather than experimental pathology. Questions and doubts about the level at which a problem should be attacked seem to me part of the life-blood of science, but their little opening for this in science as practised in the way described here.

What gives the narrative its strength is that it traces an idea from its conception through early testing to what seems to be confirmation and final acceptance. Yet if one looks closely the idea is pretty fluid, and at the end one does not really know quite what has been established. There is nothing unusual about most of this. What is unusual is the self-centredness which places new observations and ideas only in relation to what goes on in Anna's head, not the wider world. Several times I lost patience with this egocentric point of view, and I do not believe that people's minds work like this when the very best science is being practised. Nevertheless, in much of its detail the book does provide an extremely readable account of a fairly minor incident in scientific life, and I recommend it to anyone who wants to share in the excitement. It's not a reasoned study of the scientific method, and is not meant to be. As an account of an incident it will not supersede J. D. Watson's superb *Double Helix*, if only because the long, cool look which that work takes of Watson himself has yet to be equalled.

N. A. Mitchison

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Resisting infection

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Edward Arnold, £2.50
ISBN 0 7131 2806 9

It is strange to think that twenty years ago there was no real textbook of immunology, particularly since the subject goes back at least a century (or two if you date it from Jenner). Chapters and sections on immunity, antibody or complement might turn up in microbiology, pathology and biochemistry texts, while the elusive lymphocyte belonged, by default, to the haematologist. Then after a ferment of postwar work, all came together in the 1960s: antibody, lymphocytes, allergy, transplantation, the thymus were all part of the same glorious brew and suddenly everybody was an immunologist.

In 1963 Humphrey and White wrote their classic *Immunology for Medical Students*, now, sadly, somewhat out of date but well worth reading for its opening chapter, and Gell and

Coombs brought out their multi-author *Clinical Aspects of Immunology* now in its third edition (1975). Next, Roitt produced his immensely readable short paperback *Essential Immunology*, still strong in its fourth edition (1980). The fine American multi-volume *Basic and Clinical Immunology* (third edition 1980) and *The Immune System* by McComell, Macleod and Waldmann, now in a much improved second edition (Blackwell Scientific, 1981; paperback £10.95) complete the quartet of books on standard in virtually all departments. But it did not stop there; the flood continues and now we have them by the dozen, single author, multi-author, basic, clinical, simplified, a glance, for medical students, dental students, nurses, and so on.

This amazing variety reflects the problems. All sorts of people need to know a bit of immunology, but not always the same bit. And you cannot write a standard text like Gray's *Anatomy* or even Lehninger's *Biochemistry* on a subject a large chunk of which goes out of date every year. Two recent books illustrate these problems very clearly. *Fundamentals of Immunology*, a four-author German-Brazilian collaboration, covers much of the ground as Roitt, though in somewhat more detail, while Lady's *Immunobiology* briefly describes the current scene as it might interest the biologist. Both are up-to-date, well produced, and sensibly priced. What do they offer and to whom?

Incheley's little book strikes me with certain qualifications, as an excellent introduction for the student and undergraduate biologist. It can be read in a couple of hours, and even in this short space it manages to discuss the wider evolutionary significance of the various remarkable mechanisms by which animals resist infection, and even to give tantalizing glimpses of how some of these are studied in the laboratory. Annoyingly, there is no index and words are used which are not defined on their first appearance. The pictures are clear, but for one could have done with a good many more. Most books in this series (*Studies in Biology*) tend to concentrate on small fascinating areas like decomposition, asymmetry of lysosomes, and inevitably this volume lacks their comforting hermetic quality. However, it is a pleasure to read and would certainly encourage the intelligent student to go deeper.

Immunology, of course, is science, but writing about it is art, and this is where *Fundamentals of Immunology* seems to me not quite to hit the mark. It is immensely thorough, taking the reader through the basic components of the immune system, how they interact, and their useful and unwanted effects. The chapters which give the impression of greater accuracy than their raw data merits — no doubt good advice for many of us, particularly in the field of paleoimmunology. Many examples are critically considered in this section, which will prove particularly useful to those with a biological rather than a geographical background.

The third stage consists of the analysis of the cartographic material prepared. Here the author considers how floristic elements can be defined and extracted from the data and how floristic affinities between areas can be measured. This leads on, very naturally, to definitions of distribution types, disjunct, endemic, and so on.

The fourth stage of analysis, and one which occupies more than half the book, is the interpretation of all this information in terms of historical factors. The kind of questions which the plant geographer will ask of his data will depend on where the species (or group of species) evolved; when it arose and how it spread; what barriers were presented to its extension of range and how it reacted to the former vegetation in the new plant communities. This is Slot's method in approaching this section is to outline available techniques and arguments, and briefly to illustrate these by reference to specific, well chosen examples from modern research literature. The result is a very readable, informative and, indeed, entertaining text, which has been accomplished with an informed and infectious enthusiasm that is such a vital requisite of an undergraduate text.

The book does not attempt to document all, or even a substantial

BOOKS

BIOLOGICAL SCIENCES

Plant patterns

Historical Plant Geography: an introduction
by Philip Slott
Allen & Unwin, £12.00 and £5.95
ISBN 0 04 580010 3 and 580011 1

There is no shortage of books on geography, and even plant geography can hardly be regarded as a neglected area, but historical plant geography is a title which is bound to attract attention. It conjures shades of the classical writers of the Victorian era and, more recently, the work of Wulff. It was this Russian botanist, I think, who last used the term historical plant geography in the title of his book published in 1943.

The title thus promises to be true to the traditional approach to this subject, that is, to concern itself with distribution patterns of plant taxa on the Earth's surface and the factors underlying these, with emphasis upon the historical factors. In approaching it, one may hope to escape some of the recent trends in geography, such as computerized vegetation analysis and ecosystem theory, which have come to dominate several biogeography texts.

The author deals with his subject in four stages: first, the taxonomic problem of plant identification and classification, a subject often neglected in plant geography texts. I am not totally convinced, however, that its inclusion is essential to the remainder of this book, but it certainly serves as a timely reminder that without a firm taxonomic base, plant geographical studies would be impossible. Also, the value of some modern biochemical taxonomic techniques in helping to elucidate geographical problems (*Aceria* is quoted as an example here), certainly demonstrates the close links between the two disciplines.

The second stage concerns the accumulation of raw data relating to plant distribution, that is, mapping. Here the author's geographical training comes to the fore and we are presented with exhortations such as one should never produce maps which give the impression of greater accuracy than their raw data merits — no doubt good advice for many of us, particularly in the field of paleogeographical studies. Many examples are critically considered in this section, which will prove particularly useful to those with a biological rather than a geographical background.

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The book does not attempt to document all, or even a substantial

part of the conclusions of the plant geographers of the past, but it does try to demonstrate the reasoning processes which have operated in their minds. It thus avoids indigestible accumulations of information; it does not even include the customary section on plant formation (biomes) — an oft repeated and somewhat un-rewarding task when abbreviated to textbook scale, which is wisely circumvented here.

Not since Brian Seddon's *Introduction to Biogeography* (Duckworth, 1971) has a book of this type appeared on the undergraduate market. As a fresh and stimulating introduction to the traditional discipline of plant geography, it deserves a prominent place on the reading lists of all biogeography courses.

Peter D. Moore

Peter D. Moore is senior lecturer in plant sciences at King's College London.

Estuarine webs

The Estuarine Ecosystem
by Donald S. McLusky
Blackie, £12.75 and £6.25
ISBN 0 216 91115 X and 91116 8

Faced with competition from several introductory texts already available, not least his own *Ecology of Estuaries* published in 1971, the author has managed to overcome the problem of duplication by placing his emphasis on food webs, energy flow and production. He has also been greatly assisted by the undoubted increase in the amount of new information available as a consequence of the upsurge of research on estuaries. Indeed, the up-to-date and extensive reference list is excellent.

A general introduction contains familiar material such as figures of species distribution and salinity profiles. What is different is the expansion into an outline of estuarine food webs, thus laying the groundwork for future chapters.

The following three chapters on primary producers and consumers, and on secondary consumers, are well written and informative. This division, however, though undoubtedly making presentation easier, may be more artificial than is made apparent to the reader. The author rightly emphasizes that most estuarine food webs are linked to a detrital base rather than the phytoplankton source typical of other aquatic ecosystems, and that bacteria and other microbial organisms associated with detrital particles really belong to the second trophic level. However, the point that many estuarine animals are really omnivorous is not made clear, and as a result the consequent complexities of energy transfers in estuarine food webs are not clearly brought out or developed.

Possible explanations for the low species diversities observed in estuaries are given in the smallest chapter on problems of life in estuaries. This section could usefully have preceded those on trophic levels because of the relevance of the paucity of species to the elucidation of links in the food web.

The final chapter, "Man and estuaries", is in some ways the least satisfactory because of its superficial treatment. The continued disgraceful use of estuaries as repositories of waste materials is described adequately but not forcefully. Subtle influences such as the effects of freshwater abstraction on estuarine salinity regimes and organisms are not described, even though this has been a growing problem. Fisheries, including aquaculture, are not given the coverage they deserve.

Barring these relatively minor quibbles, however, this informative book is written in an easy style. I can recommend it to students, but it will also be useful to workers in this and related fields.

Kenneth O'Hara

Kenneth O'Hara is lecturer in zoology at the University of Liverpool.

Mastering genetics

Basic Population Genetics
by Bruce Wallace
Columbia University Press, \$32.50
ISBN 0 231 05042 9

Professor Wallace is one of those unusual people who has the gift of being able to explain mathematical arguments in lucid prose. This aptitude is particularly valuable when teaching population genetics to biologists whose initial distaste of algebra can be overcome only if the problem is put first in a verbal or graphical form. As one would expect, the author's handling of algebra is sure and his account of the effect of inbreeding and chance effects is the best I have seen.

Wallace has written a completely revised version of his earlier book *Topics in Population Genetics*, to serve as a second-level text for undergraduates who have had introductory courses in general biology, ecology and genetics.

The first part deals with the elementary aspects of population genetics, with chapters on the Hardy-Weinberg equilibrium, migration, patterns of mating, inbreeding, mutation, and selection. There is also a useful discussion of models in population biology, the detection and measurement of genetical variation, and genetic load theory.

A wide variety of topics are then covered in the second part: for example, the struggle to measure population fitness, hybrid vigour, models of gene action, hard and soft selection, inter-specific and intra-specific competition, and the fitness of populations. The book concludes with chapters on the forces that tend to integrate Mendelian populations and those that tend to destroy that integration.

In one way, however, the title of this book is misleading: there is no doubt that the book serves as an introductory text on the subject but it is by no means always elementary. Although Professor Wallace always writes in a clear, logical way, his long experience and mastery of the subject leads him to discuss some difficult ideas so that certain parts of the book will make considerable demands on the intellectual stamina of the student reader. There is, for example, a very full account of genetic load and why the original arguments about it are wrong. It would be misleading to give the impression that population genetics is an easy and straightforward subject, and it would be no bad thing if the student reader were stretched by parts of the book. However, some sections of the book are quite advanced.

Though understandably *Drosophila* is clearly the author's favourite organism, the range of examples considered in the text is very wide and there are well over 600 entries in the reference list at the end of the book. Nor are these references the courteous adornments customary in books of this kind, for the student is encouraged to consult many in the sections headed "For your extra attention" that are found at the end of each chapter.

This well produced book, with its large number of informative diagrams and tables, should meet with the success it deserves, especially if a less expensive paperback edition is made available.

Michael Lawrence

Michael Lawrence is senior lecturer in the department of genetics at the University of Birmingham.

Genetics, a collection of readings from *Scientific American* with introductions by C. I. Darnell, has been published by Freeman at £13.40 and £6.20. The 28 articles, opening with Mendel's classic paper, are considered under the general headings of principles of heredity, the chemical basis of heredity, genetic analysis, gene expression and regulation, genetic transactions, evolution, and applied genetics.

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Publication Spring 1982
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BIOLOGICAL SCIENCES

Cellular limits

Understanding Cell Structure
by M. W. Steer
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and £4.95
ISBN 0 521 23745 9 and 28198 9

Biochemistry and Structure of Cell Organelles
by R. A. Reid and R. M. Leech
Blackie, £11.50 and £5.75
ISBN 0 216 91004 8 and 91005 6

Most cell biology books follow a traditional pattern depending upon whether the emphasis is on microscopy and the preparation of specimens or, as is more often the case, on the structure and function of cellular components. One of the pleasures of reading Martin Steer's new book is that by aiming to fill the gap between them, it follows neither of these patterns.

The book is about transforming the two-dimensional images seen in micrographs into the three-dimensional structure of the cell. It sets out to explain the relationships which make it possible to estimate volumes, surface areas and numbers of components within a cell from their size, shape and distribution within a thin section as represented by a photograph. This indirect method of quantitative analysis is called stereology.

The major part of this book is concerned with stereology and deals first of all with the theoretical aspects of quantitative analysis. The methods that are used for determining volumes, surface areas and lengths of components are explained and there is a detailed account of the determination of numbers and sizes of components. For the sake of simplicity this analysis is confined to spherical structures although it can be applied to other shapes. Then there is a very useful account of experimental design that discusses the collection of series of micrographs, the types of test grid that are available and the statistical analysis of the information gathered. Finally, there is an explanation of errors brought about by embedding, sectioning and photography and the correction factors that can be used to adjust them.

The theoretical aspects of stereology are followed by a consideration of some examples of its use and its application, many of which I expect will find their way into a number of undergraduate courses. However, the real value of stereology is the analysis of the changes that occur in cells in different environments and at different developmental stages. A wide range of examples has been selected from the scientific literature to illustrate these applications, and I hope these will encourage more cell biologists to consider introducing the techniques into their own experiments.

Although this book is a very valuable addition to the current literature on microscopy and will certainly find a place on the bookshelves of most cell biologists, many may have problems with it. The section on quantitative analysis, for example, is very disappointing and could well have been expanded. Since quantitative analysis depends so much on the ability to recognize subcellular components, some discussion of the problems that can arise would have been very valuable. Unfortunately what the experimentalist sees in his micrographs does not always correspond to the perfect specimens used to illustrate atlases of ultrastructure, and end-on Golgi stacks or tangential sections of organelles are not always easy to identify.

Also, despite the author's claim that the theoretical treatment has been written in non-mathematical form, to persuade all microscopists that the approach is not beyond them, many sections require great concentration and several readings.

and there is a tendency to want to jump ahead and get at the examples. Martin Steer is, however, aware of this problem, as he warns the reader at the very start not to ignore these sections and that their abuse could lead to erroneous conclusions.

In contrast, the second book is well within the tradition of the standard cell biology textbook. It deals with all those intracellular structures which have limiting membranes and definable compartments, which unfortunately excludes a consideration of the plasma membrane. A successful attempt is made to give a very up-to-date account of plastids and mitochondria in the major part of the book, including an interesting section on their genetics and a description of the mapping of the mitochondrial genome. The relation of these two organelles to the rest of the cell is also elegantly illustrated in a chapter on organelles in space and time. There is also a useful account of compartmentation.

However, this emphasis leads to a rather unbalanced book, the treatment of the other organelles being a little too superficial. A much fuller account of organelles and neuro-muscular activity, for example, could have provided a valuable contribution for a book at this level. Though of high quality the selection of micrographs is also a little disappointing: being rather conventional, they do not manage to convey the excitement of modern cell biology quite as successfully as did, for example, the illustrations in Professor Hopkin's *Structure and Function of Cells*.

D. J. Beadle

D. J. Beadle is principal lecturer in cell biology at Thames Polytechnic.

History in the making

A History of the Study of Human Growth
by J. M. Tanner
Cambridge University Press, £30.00
ISBN 0 521 22488 8

This monumental work reviews the history of the study of and opinions on human growth from 594 B.C. to the present day. The book is intended to describe, from the point of view of a human biologist, the investigations that have been undertaken and the findings that have been reported, in the broadest historical sense.

The book first details studies mentioned in ancient works such as those of Galen, Aristotle and Solon, progresses to the Middle Ages and the interesting findings of Bacon and other famous ancients and then presents the contributions made by artists and philosophers, in Graeco-Roman times and more importantly during the Renaissance, to the study of human proportions. This is followed by an account of the improvements in techniques used to measure growth brought about through developments in physics and physiology in the seventeenth and eighteenth centuries.

Four chapters then outline the major achievements in research on human growth during the eighteenth and nineteenth centuries, caused by the need to recruit individuals above a certain height into the army, particularly in Prussia, and the importance of growth to the concepts of public health, family likeness and social class.

A long chapter discussing the uses of school children and school surveillance for the study of growth patterns is followed by a series of chapters covering foetal and infant growth, age at menarche, and the relation between psychological and physical development in children. European and American longitudinal studies, population surveys, and the use of growth standards are also covered.

The historical account up to 1930 provides us with a beautiful perspective of the influences and constraints that the ideas and prejudices prevalent in each era imposed on the development and progress of the

study of human growth. Even Quetelet, one of the pioneers of biometry, with all his scientific insight and powers of observation, could not disengage himself from the idea of a perfectly regular growth curve even when faced with the evidence from his own measurements of his children which clearly indicated an acceleration of growth during adolescence.

The author has himself been intimately involved in the studies of human growth that have been undertaken in the past 30 years. Perhaps because of this, he has not presented these more recent studies in quite the same critical style as is found in the first 11 chapters. A large list of longitudinal, semilongitudinal and cross-sectional studies in the United States and Europe are given but without much discussion of their shortcomings and their real contribution to the subject.

Although some mention is made of the reasons for a number of studies of human growth and how they have been used in the widest sense to influence social policy, there is little discussion about the social and political implications of such studies in modern times. There is also perhaps too little reference to the use of studies of growth in developing non-Western countries.

Even with these reservations, this is an exciting book for all those interested in the field, especially those social historians researching into the development of our knowledge concerning health and approaches designed to measure it. Measurement of height is important in this respect, as it is one of the few measurements available which can accurately portray the health of different population groups. Perhaps the book's greatest deficiency is that some of the drawbacks, errors and extrapolations made from this single measure are not emphasized sufficiently.

W. W. Holland

W. W. Holland is professor of clinical epidemiology and social medicine at St Thomas's Hospital Medical School, London.

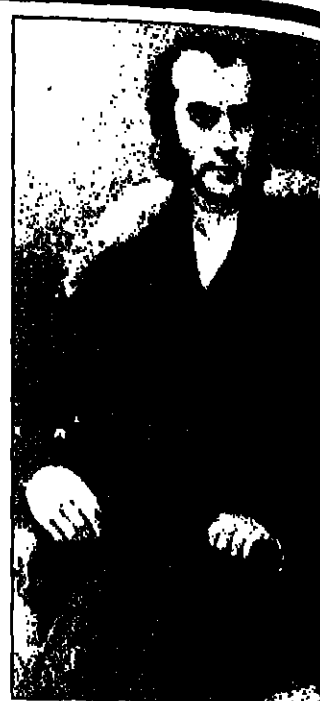
Inveterate improvers

Curator of the Dead: Thomas Hodgkin (1798-1866), doctor and campaigner for human rights
by Michael Rose
Peter Owen, £9.50
ISBN 0 7206 0527 X

Thomas Hodgkin should not be confused with his exact contemporary Thomas Hodgson (1787-1869). The former is honoured among doctors for the classic differentiation on the basis of gross anatomy of the disease which bears his name. The latter is known to a different audience as a curious precursor of Karl Marx.

However, despite representing different poles of radical nonconformity the two namesakes have many incidental features in common in their careers, as well as various points of more direct contact. Both were inveterate improvers, acquainted with George Birkbeck and with the Mechanics' Institute movement. Both wrote about the history of civilization, and were representative of a sizeable group of aspiring intellectuals scratching away at the fringes of the London literary and professional establishment. Neither was entirely successful as a writer and both suffered major setbacks in their search for academic preferment.

The short biography of Hodgkin by Rose adopts modest standards. No attempt is made to undertake an in-depth study of any aspect of the work of Hodgkin, the extensive body of his published writings being touched upon only superficially. The rich reserves of Hodgkin manuscripts preserved by his illustrious Quaker family are exploited only for incidental purposes, and a variety of other important and readily available sources is ignored. The citations are inadequate, especially with respect to



Portrait of Thomas Hodgkin in the Gordon Museum, Guy's Hospital Medical School.

manuscript sources. Intellectual associations are left unexplored. Figures like Thomas Hodgson find no place in the index.

What is most surprising, however, is that the author, who is medically qualified, passes over most of Hodgkin's pathological work. Even Hodgkin's disease attracts little more than incidental mention and no precise attempt is made to relate Hodgkin to his precursors and successors.

The narrowest view of biography is adopted. A genuinely sympathetic portrayal of the domestic side of Hodgkin's existence is undertaken, in the course of which the author occasionally uncovers interesting points concerning his family life and personal idiosyncrasies. Unfortunately, whenever the author meets issues of greater complexity the content of his text becomes thin and even factually uncertain. The reader is left wondering what differences his particular Quaker doctor from his many nonconformist medical colleagues. Hodgkin emerges as a stereotype, not more interesting or important than the others who feature in the biographical histories of the great hospitals and who dominated the dispensary movement.

Yet passing references in the book, confirmed by the solid biographical and bibliographical work of Professor Kass and his collaborators, indicate that Hodgkin possessed qualities of perseverance and originality sufficient to merit a full-length biographical study. Such a study could illuminate the history of Quaker philanthropy, scientific organization in London, the precursors of anthropology, and the story of the attempt to establish modern medical schools at Guy's and St Thomas's.

Charles Webster

Charles Webster is director of the Wellcome Unit for the History of Medicine, University of Oxford.

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ISBN 0 7131 2814 3

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by Ian P. Spellerberg
Edward Arnold, £1.95
ISBN 0 7131 2823 2

There seems to be a worryingly large number of elementary books in ecology being produced. I cannot help wonder to what extent the reasons for their production have more to do with the needs of their authors and publishers than those of the consumer.

In the case of Anderson's subject, however, there has been a need for nearly a decade for a book with this title, written by an ecologist for broad-based science students approaching the subject for the first time. Until now it has been necessary to recommend to students from a list of American texts written very much for American students and drawing almost exclusively on American examples and case studies. The other alternative has been to recommend one of the texts produced by British biogeographers which, for an ecologist, will always have gaps.

So Anderson's book fills a gap, and I think very well. I have no complaints to make about the overall content, which embraces the subject areas normally introduced in a first course in ecology at degree level in environmental sciences. The author takes a holistic approach with chapters on the biosphere, ecosystems, populations and communities, primary production, secondary production, and decomposition. There is a comprehensive reference list. The style of writing is economical and unfluffy, a tremendous amount of precise fact in a few words. It is sensibly illustrated with diagrams and very rarely does the student have to wade through two consecutive pages of unrelieved text.

Sounding almost apologetic, the author completes his book with a chapter on decomposition, which draws on his own special skills and rounds off the book in an imaginative and logical way. I will be recommending the book for student purchase, as it relates to the real world which students will experience. Spellerberg's book is quite different in objective, content and style. It follows the well-established tradition in Biology tradition in terms of size and appearance. Its objective is to describe the methods currently used in evaluation, to outline the ecological basis and to stimulate discussion on the application of evaluation methods. This is a developing field of concern in applied ecology, and it would be hardly surprising therefore if this book received very mixed reviews. My own three-year students will find it useful as a handy source of brief accounts of methods and approaches, and the list of references will enable them to delve further. It also links together for the first time experience and ideas which have often been developed in a very ad hoc way in a dispersed field.

The book falls for me in two respects. First it is a bit too academic. Doubtless it will stimulate discussion among students about appropriate methods, but in a rather abstract way. I would have liked to have seen the book based more upon how ecological evaluation is actually carried out in the real world. My own experience is that ecological, political and economic processes, often carried out necessarily in a very short time, are often early in the book, which

actually looked at the practice of evaluation would much enhance the value of theory and ideas by enabling an examination of the mismatch between them, would have strengthened the book.

My second objection is the style. It may be that Spellerberg is a less experienced writer than Anderson, but his text is much less precise and there are plenty of difficult sentences. Some are needlessly ambiguous - for example, "the Nature Conservancy Council is one body which has a responsibility for the selection, acquisition and protection of National Nature Reserves." The author rightly underlines the importance of effective communication in the process of applying ecological evaluation, and it is interesting to speculate whether the failure of authors to achieve this so far is a reason for the ad hoc procedures so often used by evaluators on the ground.

In summary, both these books are good value for money. Anderson's should prove of lasting value. Spellerberg's will benefit from quick revision, firstly because it deals with a fast-changing field and secondly because of the need to improve on style and content.

John Barkham

John Barkham is senior lecturer in the school of environmental sciences at the University of East Anglia.

Ability to regenerate

The Development of the Vertebrate Limb: an approach through experiment, genetics, and evolution
by J. R. Hinchliffe and
D. R. Johnson
Oxford University Press, £20.00
ISBN 0 19 857552 1

Vertebrate Limb Regeneration

by H. Wallace
Wiley, £19.50
ISBN 0 471 27877 7

I can highly recommend these two books, both excellent in their contrasting approaches, but appealing to rather different groups of readers. The first is the more general work, including the subject matter of the other in a short chapter of 15 pages. It moves rapidly across the field picking out interesting ideas and hypotheses and presenting them briefly and lucidly in a way that should make it appeal to anyone with a basic knowledge of science. Despite this general accessibility, however, the book should be of value even to those professional scientists whose work it describes. It could also form an ideal text for anyone seeking a subject around which to plan a new course unit in a life science degree syllabus and it is a first-class source of references on which to base more detailed studies.

The scope of the book is wide, examining the development of the vertebrate limb in both its evolutionary and embryological aspects. It also includes a brief foray into the field of limb regeneration, and the relevance of the ideas generated there to other areas of research. The depth of detail varies from subject to subject and is biased towards the embryological. The text is well ordered and the line drawings are good and helpful. Many of the photographs are unfortunately of poor quality, being out of focus or of inferior specimens. There is a very good reference list, subject index and author index.

The functional basis (or biology) of

author index. The best features of the book are the superb summaries at the end of each chapter. These exuberant and entertaining sections, in which Wallace gives his own interpretation of the field based on the data presented, go a long way to relieving the tedium of the intervening text.

The authors claim to have set out to produce a "reference book which is also an account of the current state of the art". It probably succeeds in the latter by being well up to date, at least in reviewing ideas, though this does have the drawback that it will probably date very rapidly. It is not, however, fully adequate as a reference book as the presentation of evidence for and against the various ideas advanced is minimal. In this regard, Wallace's book is far superior.

My greatest dislike was the apparent unwillingness of the authors to indulge in speculation or to make judgments on conflicting hypotheses: they have tried to be too objective. Had they included summaries at the end of each chapter in which they expressed an opinion it would have both enlivened the book and provided an indication to the reader of subconscious prejudices in the main body of the text.

Wallace concentrates on a much more limited aspect of the vertebrate limb, its ability to regenerate. Naturally he devotes most of his space to the amphibian, and it is only in this group that an amputated limb will regenerate so as to produce a good working replacement. However, he does relate the work to the wider field of developmental problems and in his final chapter presents an excellent (though pessimistic) discussion of the possibilities for controlling regeneration in mammals.

The book will appeal to a more limited audience, mainly those already having an academic interest in the subject, as it is very definitely a scientific monograph. Approximately the same total length as Hinchliffe and Johnson, it devotes its entire space to the subject of regeneration. It is well written and thorough and reviews a more limited subject in great detail. It is, however, a much drier book, scholarly, exhaustive and exhausting, and not so easily recommended to the dilettante.

In some ways it resembles Hinchliffe and Johnson in its approach, being basically a book of ideas and hypotheses. In Wallace, however, these are supported by a careful presentation of the data; in particular there are a large number of well laid out tables, making this an invaluable reference work that effectively replaces a large number of source texts. It too has good illustrations and an excellent reference list and subject index, but sadly omits an

Dennis Summerbell
Dennis Summerbell is a member of the developmental biology division of the National Institute for Medical Research, London.

Functional limitations

Invertebrate Biology: a functional approach
by P. Calow
Croom Helm, £11.95 and £5.95
ISBN 0 7099 0000 7 and 0001 5

Invertebrates show an extraordinary diversity in terms of numbers of species, degrees of physiological and ecological adaptation and body organization. The teacher faces the problem of whether to pick his way through this morass by attempting to subdivide either the animal kingdom into a series of taxa or animal function into a series of processes and then cross-correlating these to give an overall picture. Such design contrasts may be seen in E. J. W. Barrington's *Invertebrate Structure and Function* which considers such topics as feeding or locomotion at the chapter level and considers how these processes occur in different groups at the sub-chapter level; and R. McN. Alexander's *The Invertebrates* which deals with the different phyla at the chapter level and selects special functions for treatment at the sub-chapter level.

Calow's approach differs from either of these in that he does not treat or consider the systematics, the structural diversity or the consequent functional diversity of invertebrates but considers them as organisms with the problem of achieving the simplest and most universal of functions, namely growth of the individual and reproduction. Since these two processes require the acquisition of food, its metabolism and conversion, the partition of resources between the individual and its offspring, all these topics are considered as the bases for chapters.

In considering the validity of the book, a central question must be the definition of the term "functional" and its use in the title. This I interpret as referring to the special properties of the constituent parts or processes that assist in the operation of the whole: it is hard therefore to ignore the locomotor processes that lead to food acquisition or escape, the sensory inputs and the nervous processes of integration and control or even the interactions between individuals. It would be easier to react to the book were it to be entitled "The functional basis (or biology) of

invertebrate metabolic processes", for though I can accept that Calow's view includes important functional aspects, I do not accept that it is the only functional approach nor would I wish my students to confine themselves to these aspects.

How well does he sustain his approach? The treatment is indeed novel and interesting. The chapter on food acquisition contains discussions of food availability and animals' reactions to this, the types of strategy desirable for obtaining different classes of food and on the design of guts, though I felt that the range of examples was limited.

In the chapter on metabolism, I suspect that some of the treatment of respiratory exchange will irritate readers because it is presented at such an elementary level, although other sections on the response of animals to varying oxygen tension or on the effect of size on metabolism are interesting and useful. The treatment of excretion is disappointingly brief and though there is a brief consideration of storage excretion, I looked in vain for discussion of its limitations and occurrence. There is, however, a discussion of the relative costs of various excretory substances.

The successful chapter on growth provides many useful insights. The area on reproduction, however, is patchy, with what seemed an exceedingly naive correlation between spiral cleavage and determinate embryology contrasting with nice discussions of the relative merits of parthenogenesis or sexual reproduction and of breeding once or breeding repeatedly. The final chapter, entitled "Integration", fails to achieve the author's stated aims of showing how the different aspects of an organism's metabolism fit together or how the organism interacts with its environment.

Viewed as a whole, the book clearly reflects the author's interest in the biology of metabolic processes. He has already reviewed some of this and draws heavily on his own work throughout; this then is a highly individual not to say idiosyncratic approach. In places it is successful, interesting and enlightening. In others, it is irritating because of the gaps, because sometimes the reader is only offered the bare facts without conclusions and because it is easy to wonder whether his view is the most appropriate. Although I shall encourage my students to read it, I shall also expect them to explore it with a critical eye.

H. C. Bennet-Clark

H. C. Bennet-Clark is lecturer in invertebrate zoology at the University of Oxford.

Evolution and Speciation, a collection of essays on evolutionary biology in honour of M. J. D. White's seventieth birthday, has been edited by W. R. Atchley and D. S. Woodruff and published by Cambridge University Press at £30. Contributions cover hybrid zones, speciation, and chromosomal evolution in various groups of insects, lizards, and mammals.

BIOLOGICAL SCIENCES AUTUMN 1981

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BOOKS

BIOLOGICAL SCIENCES

Vertebrate appeal

Lecture Notes on Vertebrate Zoology by Ronald Pearson and John N. Ball. Blackwell Scientific, £7.50. ISBN 0 632 00729 X

In attempting to provide the foundations of an undergraduate course on vertebrates, the authors of this new textbook have followed orthodox design and constructed the core of their book on chapters on the mini vertebrate classes, progressing (in an evolutionary sense) from the Agnatha to the Mammals. Compared with its companion volume, *Laverack and Dando's Lecture Notes on Invertebrate Zoology*, the coverage of the animal groups involved is more coherent as it has the luxury of dealing with a single major taxonomic group.

Each chapter comprises a brief systematic résumé of the classes concerned, followed by a series of subsections on selected topics (for example, integument, skeleton, musculature and major organ systems). Each topic is then broken down into a series of numbered paragraphs dealing with specific points. Within this framework, aspects of the evolutionary history, functional morphology and adaptive radiation of each group are covered in addition to basic anatomy. A reasonable reading list is provided at the end of each chapter.

Inevitably, such a short and wide-ranging book cannot satisfy all needs and will not always be ideally balanced. Indeed, this could be used to advantage by course lecturers. But I feel that the authors have been a little too ambitious, allowing error to creep in at a number of points. Also, they have been tempted in a number of instances by their rather unfortunate choice of illustration. More diagrams could also have enhanced the text enormously, allowing similarities and differences to be emphasized.

The first chapter deals briefly with the basic pattern of organization in all vertebrates and provides a table which chronicles the appearance of the major groups of vertebrates (what happened to the higher fish and birds?) with that of the predominant vegetation, on the Phanerozoic time-scale. I must query the claim (page 2) that there is some evidence of land plants in the Cambrian. So far as I am aware there is no unequivocal evidence of land plants earlier than the Upper Silurian.

In general, the coverage of all the vertebrate groups in the following chapters is excellent. However, in the chapter on the agnathans it would have been appropriate to spend a little time explaining the function of the reversed heterocercal tail of anaspids especially after that of the heterocercal and hypocercal tail of ostracoderms had been, albeit briefly, explained. And the section on light generation in bony fish could have mentioned *Pachystomus*, which employs a red-light photophore as a "snapper-scope" to catch deep-sea fish whose eyes are blue-green sensitive.

Reptiles are covered a little more briefly than other groups. Though basically sound, there are several notable points. The leathery temporal opening is not bounded by a squamosal as in all other parapsids (= euryapsids of others). This misidentification was noted over a decade ago but has persisted in the literature. The proposal that the long, tubular cranial crest of the ornithomimid dinosaur *Parasaurornis* served as a snorkel was disproved many years ago. There is also a confusing use of the term "homiothermal" synapsids (page 104) and "homiothermal" dinosaurs (page 106). Finally, the brief chapter on locomotion scarcely reflects the enormous diversity of locomotor

adaptations displayed by reptiles.

In the chapter on birds, the terminology in relation to the skull bones is rather confusing on pages 110-111, the facial region being described as mainly made up of the premaxillary and nasal bones, while in the next paragraph there is reference to "a craniofacial hinge between the facials on the one hand and the premaxillaries and nasals on the other". In the same paragraph, the kinetic movements of the skull are described, although the significance of the post-orbital ligament is missed, and it is a pity that the relevant diagram (Fig 8.3) is not labelled so as to assist the description. In the description of the wing, the hand is stated to be composed of digits II, III and IV yet later on (page 120) the hand of the batwing is described as having a "clawed pollex (sic) and clawed index digits..." implying a hand possessing digits I, II and III! *Archaeopteryx* is also described as an archaic bird which shows anatomical similarities to coelurosaurian dinosaurs. It is a pity that this group is omitted from the section on dinosaurs in the reptile chapter.

The final two chapters, featuring anatomy and adaptive radiation in mammals, provide good descriptions and are well illustrated. Particularly interesting is the comparative anatomy of the marsupial and placental, so rarely discussed in general vertebrate texts.

The book is refreshingly neat and concise, summarizing an enormous amount of material very effectively. Students may find it more appealing than the more authoritative and comprehensive texts like *Romer and Parson's Vertebrate Body*, perhaps *McFarland, Pough and Cade*, and *Heiser's Vertebrate Life*.

D. B. Norman

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A genuine synthesis

Population Ecology: a unified study of animals and plants by Michael Begon and Martin Mortimer. Blackwell Scientific, £15.00 and £7.90. ISBN 0 632 00812 1 and 00667 6

Population ecology has so far mostly been treated superficially in the large American type of comprehensive textbook or in specialized texts dealing only with some selected group of organisms. G. Evelyn Hutchinson's *Introduction to Population Ecology* does deal with both animals and plants, but Begon and Mortimer's attempt to synthesize this large and important field is a more useful and complete animal and plant population ecology.

The plan of the book is straightforward. In three parts it deals with single species populations, interspecific interactions and some general topics ("syntheses"): life-history strategies, population, regulation and community structure. Life tables and their components and k factors are introduced in chapter one, in which animal and plant examples are presented side by side.

Intraspecific competition is discussed in chapter two, which makes use of k factors to illustrate the effects of density-dependent mortality. Begon and Mortimer's unified approach is based here because it allows them to use the most elegant examples which come from experiments with plants. From these they transfer to animal populations and show that for both plants and animals the simple and traditional dichotomy between scramble and contest types of competition is unrealistic. Self-thinning in plant populations is also mentioned, though only very briefly.

The need to compromise between realism and simplicity in the choice of models is pointed out in chapter three, dealing with models of single species populations. On these grounds the authors concentrate on difference equations and matrix models. The chapter is well set out and demonstrates clearly to students the importance of population



Hollow wooden mask from Tabar Island, New Ireland (height 58 cm). Taken from *Man as Art: New Guinea body decoration*, a collection of portraits of tribesmen in tribal dress, with their masks, by Malcolm Kilk. The book is introduced by Andrew Strathern and published by Thames and Hudson at £20.

models.

Chapter four on interspecific competition, competition exclusion and the niche and chapter five on predation both treat their subjects in a traditional way but also benefit from a combination of examples from both animals and plants. The problems of determining whether interspecific competition is occurring are discussed, though evidence from field studies is only briefly mentioned. The chapter on predation makes a sensible link between predator/prey and plant/herbivore interactions.

An important feature of the book is the economy the authors have achieved in dealing with their examples. Plant and animal studies are used to complement each other and the same studies are used recurrently to illustrate different points in different chapters. If this has a drawback it is that the reader will get little feel for the variety of behaviour exhibited by different species and will begin to wonder if all plants behave like annual meadow grass.

The basic similarities of animal and plant populations are emphasized throughout. Although this is instructive - for instance, where animal territoriality and space capture by plants are compared - some important differences between animal and plant populations have been overlooked. The fate of a plant is often tied to its stage rather than plastic growth. It would have been useful to mention this and the consequences of vegetative spread, both of which are omitted. In fact para-

practising taxonomists' its content has been well chosen and its three sections well defined, each being preceded by a brief introduction explaining the general field of enquiry and the contemporary debates, and generally establishing the context for the succeeding contributions.

The first section, on species and speciation, opens with two chapters, by Lane and Marshall and by White, on the status and meaning of such terms as race, sibling species, subspecies and superspecies. Greenwood outlines the adaptations of the species-flocks of cichlid fishes in Lake Victoria, emphasizing that they may well have evolved allopatrically as a result of repeated division and re-union of smaller lakes and river systems. The evolutionary role of parthenogenesis (in aphids) is described by Blackman, and that of polyploidy (in plants) by Gliby.

By far the most interesting chapters in this section, are the two in which Hammond discusses speciation in the face of gene-flow, and the origin of reproductive barriers. In dealing with the current argument over the possibility of sympatric speciation, he points out that much of the evidence for the classic allopatric model (outlined here by Snow) is based on bird studies, but that it cannot be assumed that such conditions can be extrapolated to much smaller and species-rich organisms such as insects.

Section two, on coexistence and coevolution, begins with a thoughtful and analytical essay by Rosen on the enigma that organic diversity is highest in the tropics, using data on the distribution and life of corals. Curd discusses the theory of competitive exclusion, his mathematical model and computer simulations being, as he notes, far more convincing than the data derived from experiments on natural microbial communities. In two papers on marine life, Boxshall suggests ways in which plankton may be able to speculate allopatrically, and Platt discusses the role of the meiofauna, leading to interesting speculations on the origin of the Metazoa as an anaerobic consortium of the meiofauna.

Coevolution in which two groups interact with one another, is illustrated by several contributions - Snow (plants and birds), Eastop (plants and insects) and Wright and Southgate (molluscs and their dipteran parasites) - with interesting and illuminating examples of adaptation. Evidence from montane species, used by Arnold, suggests that interspecific competition has produced both character displacement and the colonization of new environments.

The idea that the phenomena of mimicry have long been thoroughly understood is conclusively dispelled by Vane-Wright, who shows how small a fraction of their potential richness as an arena for the study of many aspects of evolution. Finally, Taylor documents the sudden increase in the diversity of predatory gastropods in the late Cretaceous, and their effects on the composition and structure of marine communities.

In the final section on biogeography, Peak shows that the distribution of land snails in the Pacific Islands can be explained using a dispersal model, involving a constant interplay of age, area, height and degree of isolation. Patterson contributes a clear comparison of dispersal and vicariance as applied to the history of North American continental fishes, and Humphries shows how a new cladogram of the different species of the southern beech, *Nothofagus*, can provide a reasonable biogeographic explanation of the biogeography of that genus.

This interesting and well written volume will be valuable in many ways - for its definitions of many up-to-date examples of evolutionary processes or their results (with sometimes conflicting interpretations), for the different workers, and for the comments on the history of the ways in which we have come to hold our opinions or to view them from new angles or with new scepticism. It is surprising, however, at the presence of only two exclusively botanical contributions.

Barry Cox
Barry Cox is a professor of zoology at King's College, London.

Jonathan Silvertown

Jonathan Silvertown is lecturer in biology at the Open University.

Evolution exposed

Chance, Change and Challenge Volume II: The Evolving Biosphere edited by P.L. Forey. Cambridge University Press, £32.50 and £11.50. ISBN 0 521 23811 0 and 28230 6

The general theme of biological evolution is, of course, almost limitless, and this second volume of essays, written predominantly by members of the staff of the British Museum (Natural History), lays no claim to being a comprehensive review. Its objective is "to take a closer look at certain aspects of evolutionary theory through the eyes of

NOTICE BOARD

Chairs

Dr R. J. Cherry, at present associate professor at the Eidgenössische Technische Hochschule Zurich, has been appointed to a chair in biological chemistry at the University of Essex from April 1, 1982.

Forthcoming Events

"World, the Third World and Western Regions" a conference sponsored by the United Nations Association, is to be held at the University of Sussex on October 17 between 10.30-12.00. Speakers include: Professor David Jolly of the University of Sussex, "The Background to the Brandt Report", "Future Options" will be discussed by Mr Edward Heath MP. Fee: £1.50. Details from the above address.

"Land Policies for the 1980s" a one day conference organized by the Department of Estate Management of South Bank Polytechnic is to be held on October 21 at the polytechnic, Wandsworth Road, London SW8. The conference will discuss how recent Government initiatives in the field of land policy such as enterprise zones, urban development corporations and land registers are being implemented. Fee: £20.00. Details from the above address.

"Man Extinct in the Fossil Record" the Tenthredinid Memorial lecture is to be delivered by Professor A. Hallam, Lapworth Professor of Geology at Birmingham University on October 19 in the main lecture theatre of the department of geology Newcastle-upon-Tyne University. Admission free.

"On Making Peace Possible" the Sophia lecture is to be delivered by Professor Dorothy Crowfoot Hodgkin, emerita professor of the University of Oxford and chancellor of the University of Bristol on October 22 at 5.30 pm in the Oms Auditorium, School of Physics, Newcastle-upon-Tyne University. Admission free.

"Secret Abuse" by Dr Joyce Watson, department of general practice, "China - Land of the Roadside Million" by Mr J. Jowett, department of geography and "Soviet Foreign Policy and the Unhappy Marriage between Ideology and Self

Interest by Professor W. Wallace, Institute of Soviet and East European Studies are some of the topics which will be discussed in a series of lunch hour lectures at the University of Glasgow on October 20, November 10 and December 15 respectively between 1.15 and 1.55 pm in the Boyd Orr Building of Glasgow University.

The Eleventh Uplink lecture will be held under the auspices of the Association of Law Teachers on November 6 at 4 pm in the New Theatre of King's College, London. It will be delivered by Professor J. A. T. Griffith under the title "The Teaching of Law and Politics". Open to non-members.

"Promises and Performance in Social Research" the annual workshop and annual general meeting of the Social Research Association is to be held on November 3 between 9.30-5.30 pm at Caxton Hall, London SW1. Speakers include Professor David Everly. Non-members welcome. Details from Chris Gostick, at 820-870.

"Resources for FEHE in the 1980s" a study conference organized by Coombe Lodge is to be held from November 2-6, at the College, Blagdon, Bristol BS16 6RD. The conference will examine the current funding mechanisms and resource planning and control procedures in further and higher education and identify what needs to be changed and how. Details from the registrar at the above address.

Mrs Shirley Williams will deliver the sixth Bagg Memorial lecture on the general theme of "Happiness" - what it is and how it may be achieved by individuals as well as by nations, on November 19 at the University of Birmingham, Birmingham B15 2TT.

"Inexplicit policies in race and education" by Dr Sally Tomlinson, lecturer in the department of educational research, Lancaster University, the second of a series of educational policy seminars to be delivered at the Institute of Education, Committee Room 1, 4.15 to 6 pm on November 16.

Open University programmes October 17 to October 23

Saturday October 17

8.00 Mathematics and applied calculus. Revision Tutorial (A2722; prog 17).
8.15 An introduction to Science Fiction: Towards the 20th Century (A101; prog 32).
8.30 Maps and Information. Revision (S1291; prog 16).
8.45 Organic Chemistry. Where From Next? (S246; prog 10).
9.00 Introduction. The New Forest (S2-3; prog 6).
9.15 History of architecture and design 1890-1930. Continuation of the course (A303; prog 23).
9.30 Social work, community work and society. Women, Welfare and Work (DE206; prog 17).
9.45 Music. Introduction.
10.00 An introduction to course. Life in a Railway Factory (A101; prog 32).
10.15 Science foundation course. The Climate (S101; prog 11).
10.30 Ecology. Conservation and the British Flora - Ecology. Continuation (S232; prog 8).
10.45 Maps and work. Taking the Exam (DE351; prog 17).
11.00 Preparing for Exams (A232; prog 11).
11.15 Politics. Politics and the World Economy (A232; prog 11).
11.30 Industrial relations. Women in Trade Unions (T2121; prog 4).

Sunday October 18

9.00 Science foundation course. Energy: Closing the Gap (S101; prog 22).
9.15 Mathematics foundation course. The Fundamental Theorem of Algebra (M101; prog 30).

Conference

bfi Education

MEDIA EDUCATION CONFERENCE

For teachers of the media, especially in secondary and further education. To be held at Goldsmiths' College, Lewisham Way, London SE4. Further details and application form from: BRITISH FILM INSTITUTE Education Department (Conferece) 81 Dean Street, London W1V 6AA.

Monday October 19

8.00 Mathematics and applied calculus. Revision Tutorial (A2722; prog 17).
8.15 An introduction to Science Fiction: Towards the 20th Century (A101; prog 32).
8.30 Maps and Information. Revision (S1291; prog 16).
8.45 Organic Chemistry. Where From Next? (S246; prog 10).
9.00 Introduction. The New Forest (S2-3; prog 6).
9.15 History of architecture and design 1890-1930. Continuation of the course (A303; prog 23).
9.30 Social work, community work and society. Women, Welfare and Work (DE206; prog 17).
9.45 Music. Introduction.
10.00 An introduction to course. Life in a Railway Factory (A101; prog 32).
10.15 Science foundation course. The Climate (S101; prog 11).
10.30 Ecology. Conservation and the British Flora - Ecology. Continuation (S232; prog 8).
10.45 Maps and work. Taking the Exam (DE351; prog 17).
11.00 Preparing for Exams (A232; prog 11).
11.15 Politics. Politics and the World Economy (A232; prog 11).
11.30 Industrial relations. Women in Trade Unions (T2121; prog 4).

Tuesday October 20

8.00 World politics. Structural Power: 3. Dominance and Dependence (D223; prog 11).
8.15 An introduction to materials. The Transformer Core: The Materials Problem (T251; prog 11).
8.30 Evolution. Prey for the Predator (S246; prog 10).
8.45 Graphs, networks and design. Graphs, Networks and Design (T2361; prog 16).
9.00 Cognitive development: language and thinking from birth to adolescence. A Conversation with Jerome Bruner (S246; prog 10).
9.15 The control of education in Britain. Adults and education (A232; prog 11).
9.30 The control of education in Britain. Adults and education (A232; prog 11).
9.45 The control of education in Britain. Adults and education (A232; prog 11).
10.00 The control of education in Britain. Adults and education (A232; prog 11).
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11.15 The control of education in Britain. Adults and education (A232; prog 11).
11.30 The control of education in Britain. Adults and education (A232; prog 11).

Wednesday October 21

8.00 Linear mathematics. Review (M201; prog 34).
8.15 Introduction. The New Forest (S2-3; prog 6).
8.30 The development of instruments and their music. "Clarks" (A204; prog 10).
8.45 History of mathematics. An Evolutionary Model (A204; prog 10).
9.00 Systems organization: the management of complexity. IATA (2): Negotiations in Tel Aviv (S246; prog 10).
9.15 Schooling and society. Education in Portugal (S246; prog 10).
9.30 Language development. "The Island" (P212; prog 11).
9.45 Language processing. New Types from Chat (T232; prog 16).
10.00 Conflict in the Family. A Good Neighbour Service (P235; prog 5).
10.15 Schooling and society. Education in Portugal (S246; prog 10).
10.30 The Earth's physical resources: Ideal for the Future (S246; prog 10).
10.45 Images and information. Revision (S1291; prog 16).
11.00 Systems behaviour. Shipbuilding (S1291; prog 16).
11.15 Evolution. Prehistoric People: Unearthing Our Past (S246; prog 10).
11.30 The control of education in Britain. Adults and education (A232; prog 11).
11.45 The control of education in Britain. Adults and education (A232; prog 11).
12.00 The control of education in Britain. Adults and education (A232; prog 11).

Thursday October 22

8.00 Conflict in the Family. A Good Neighbour Service (P235; prog 5).
8.15 Schooling and society. Education in Portugal (S246; prog 10).
8.30 The Earth's physical resources: Ideal for the Future (S246; prog 10).
8.45 Images and information. Revision (S1291; prog 16).
9.00 Systems behaviour. Shipbuilding (S1291; prog 16).
9.15 Evolution. Prehistoric People: Unearthing Our Past (S246; prog 10).
9.30 The control of education in Britain. Adults and education (A232; prog 11).
9.45 The control of education in Britain. Adults and education (A232; prog 11).
10.00 The control of education in Britain. Adults and education (A232; prog 11).
10.15 The control of education in Britain. Adults and education (A232; prog 11).
10.30 The control of education in Britain. Adults and education (A232; prog 11).
10.45 The control of education in Britain. Adults and education (A232; prog 11).
11.00 The control of education in Britain. Adults and education (A232; prog 11).
11.15 The control of education in Britain. Adults and education (A232; prog 11).
11.30 The control of education in Britain. Adults and education (A232; prog 11).

Friday October 23

8.00 Language development. "The Island" (P212; prog 11).
8.15 Schooling and society. Education in Portugal (S246; prog 10).
8.30 The Earth's physical resources: Ideal for the Future (S246; prog 10).
8.45 Images and information. Revision (S1291; prog 16).
9.00 Systems behaviour. Shipbuilding (S1291; prog 16).
9.15 Evolution. Prehistoric People: Unearthing Our Past (S246; prog 10).
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11.30 The control of education in Britain. Adults and education (A232; prog 11).

Noticeboard is compiled by Patricia Santinelli and Milla Goldie

Grants

Bath Education - Dr N. D. C. Harris - £10,925 from the Council for Educational Technology - for his work on the dissemination of CET/Schools Council evaluation materials.
Educational Services Unit - Dr C. R. Palmer - £10,823 from Shell International Petroleum for writing training manuals.
Electrical engineering - A. R. Daniels and Dr B. A. White - £5,413 from the SRC for their research into the use of distributed microcomputing systems for real time simulation and control of complex power systems; A. R. Daniels, Dr B. A. White and Dr R. J. Lipcynski - £53,994 from the SERC for their research on the operation of a model vehicle system using linear synchronous motors in the lift and propulsion modes. Professor J. F. Eathorn and Dr M. J. Bullock - £49,770 from the SERC for research into high speed linear synchronous traction motors.
Engineering - Professor F. J. Wallace - £52,066 from the SERC for research into diesel type combustion studies in a high speed constant volume cylindrical chamber; Dr D. K. Longmore and Dr C. W. Stammers - £21,023 from the SERC for research on attenuation of noise in hydraulic systems by means of flexible reinforced hoses and the mechanics of hose wall deformation.
Materials science - Dr V. D. Savits and Dr G. Love - £40,000 from the SERC for work on the development of quantitative light element microanalysis; Dr T. J. King - £10,346 from the SERC for his work on the design of a database computer.
Physics - Professor G. A. Saunders - £21,212

from the SERC for high pressure ultrasonic studies of soft acoustic phonon transitions.

Middlesex Polytechnic Transport Research and Consultancy Group - £20,000 from the SERC for a two-year research project into the use of Bayesian statistical methods for evaluating the effectiveness of road accident remedial measures.

Southampton Chemistry - £15,800 from the SRC to study the synthesis of antileptogenic agents; - £15,800 from the SRC to study the stereo-specific synthesis of insect pheromones.
Oceanography - £30,924 from the NERC to study photosynthesis modes and microelectrode processes in the marine plankton, their interaction and trophic consequences; - £11,406 from the NERC for research into magnesium metabolism in mesopelagic decapods.
Electrical engineering - £35,274 from the SRC for research into superconducting A.C. generators.
Electronics - £26,336 from the SRC for research into a digital digital controller for automobiles.
Psychology - £20,955 from the SRC for research into latent inhibition and habituation.

THE BRITISH COUNCIL

Specialist Course

University Finance

27 June - 9 July 1982 in Oxford

The course will examine the practices of resources allocation to and within universities, particularly as they affect the senior university financial administrator. There are three main themes to the course: government arrangements for and methods of university funding (including the role of the university); allocation, use and control of funds within the institution, and problems involving reconciling competing demands on available resources; measuring the effectiveness of financial administration and management in universities.

There will be ample opportunity for up-dating and exchanging knowledge of the subjects covered by the course.

The Director of Studies will be Mr William Hyde, MA, FCMA, FCCA, Secretary of the Chest, University of Oxford.

The course is intended for senior staff concerned with university finance, including bursars, finance officers, accountants, financial planners and their deputies.

There are vacancies for 25 members

Fee Residential £450; Non-residential £300

Applications should be received in London by 28 February 1982

Further information and application forms for this, and other British Council specialist courses, can be obtained from your local British Council office or from the Director, Courses Department, The British Council, 65 Davies Street, London W1V 2AA.

THE IVAN MORRIS MEMORIAL PRIZE

The British Association of Japanese Studies invites entries for an essay prize in memory of the late Professor Ivan Morris. The value of the prize is approximately £200 and the competition is open to all undergraduates in universities and polytechnics in the United Kingdom. The subject for this year's essay is: "The Image of Japan in the British Media". Essays should be typewritten and not more than 4,000 words in length. They should be sent to:

Dr J. Hunter, International Centre for Economics and Related Disciplines, London School of Economics and Political Science, 10 Porcupine Street, London WC2A 2LL.

ENVIRONMENTAL EDUCATION FOR THE VOCATIONAL STUDENT

DES Teachers Short Course 14-17 December 1981 at

Wolverhampton Polytechnic

Opening Speaker: Mrs Shirley Williams. The course will consider the pre-vocational, initial professional and post experience stages of vocational education, and will highlight the implications of waste, site and over specialisation in our developing technologies.

Further details from Mr. P. Crockett, DES, HM Inspectorate, Mowden Hall, Staindrop Road, Darlington DL3 9BG.

Classified Advertisements

To place your advertisements write to:

The Advertisement Manager,
The Times Higher Education
Supplement, P.O. Box 7, New
Printing House Square, Gray's
Inn Road, London WC1X 8EZ.
Tel. 01-837 1234.

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Art
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Administration

Overseas

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Appointments wanted:
Other Classifications:
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Rates:

Classified Display - £8.25 psc
Minimum size: 9cm x 1 col
@ £74.25
Classified Linage - £1.60 per
line
Minimum 3 lines - @ £4.80
Box number - £2.00
Copy deadlines:
Classified Display:
Friday in the week prior to
publication
Classified Linage:
Monday 10.00 am in the week
of publication

Universities

NATIONAL UNIVERSITY OF SINGAPORE FACULTY OF LAW

Applications are invited for teaching appointments in the Faculty of Law. The Faculty is currently interested in candidates with postgraduate qualifications in law and relevant teaching/research experience in the following areas: Jurisprudence, Contract Law, Shipping Law, Insurance Law, Banking Law and Commercial Law.

Gross annual emoluments range as follows:
Lecturer \$28,000 - 48,000
Senior Lecturer \$34,000 - 74,000
Associate Professor \$42,000 - 88,000
Professor \$50,000 - 102,000
(£1 stg. = \$12.50 approx.)
The commencing salary is dependent on a candidate's qualifications, experience, and the level of appointment.
Staff may be considered for tenure appointment after an initial contract of three years. Leave and medical benefits are provided. Under the University's Academic Staff Pension Fund Scheme, the staff member contributes to the fund at the present rate of 22% of his salary subject to a maximum of \$500 p.m., and the University contributes 20% of his monthly gross salary. The sum accruing to the staff member's credit in the fund may be withdrawn when he leaves Singapore/Malaysia permanently. Other benefits include: a gratuity in the amount of \$51,000 to \$52,000, and education allowance in respect of children's education subject to a maximum of \$12,000 p.a., subsidised housing at rental ranging from \$45 to \$120 p.m., message allowance and baggage allowance for transportation of personal effects to Singapore.
Application forms and further information may be obtained from:
Mr. R. E. Sharma
Director
NUS Overseas Office
4 Chisholm Street
London SW1
The Recruitment Unit
National University of Singapore
Kang Road, Singapore 1191.
THE81

UNIVERSITY COLLEGE LONDON College Secretary

Applications are invited for the post of Secretary of University College London, to which an appointment will be made from 1 September 1982. The Secretary is head of the administrative staff of the College, with direct responsibility under the Provost for the implementation of College policy. The post carries professional status and a salary in the upper part of the Professional range.
Applications should be made, not later than Monday 16 November 1981, to the Provost, University College, London, Gower Street, WC1E 6BT, from whom further details may be obtained.
THE81

ST. JOHN'S COLLEGE OXFORD NORTH SENIOR SCHOLARSHIPS

The College proposes, if suitable candidates present themselves, to select two North Senior Scholarships, tenable from 1 October, 1982. Applicants should not normally have exceeded 26 years of age at date of election. Successful candidates will have the right to sit at High Table once a week in Full Term and will be entitled to a free room in College for two years.
The Scholarships will be tenable for two years in the first instance but will be renewable for a third year. Eligibility will normally be restricted to U.K. graduates in receipt of graduates awards. The value of the Scholarships will be equal to the amount of DES/BRG or similar awards plus academic fees less the value of awards held.
Further particulars and forms of application may be obtained from the Senior Tutor. Completed application forms should be sent to the Senior Tutor as early as possible and not later than Saturday, 31 October, 1981.
THE81

UNIVERSITY OF HONG KONG LECTURESHIP IN URBAN STUDIES/ ECONOMICS (Re-advertisement)

Applications are invited for the post of Lecturer in Urban Studies/Economics in the Centre of Urban Studies and Urban Planning, University of Hong Kong.
Applicants should have a Master's or preferably a Ph.D. degree in economics or urban planning, relevant teaching and research experience, and should specialise in one or more of the following fields: international economics, urban and regional economics, economic development and public finance.
Annual salary (dependent on age, experience, etc.) will range from \$112,000 to \$132,000 (plus \$12,000 for housing allowance, \$12,000 for medical insurance, \$12,000 for pension, and \$12,000 for gratuity). Starting salary will depend on qualifications and experience.
At current rates, salaries are well not exceed \$132,000 (plus \$12,000 for housing allowance, \$12,000 for medical insurance, \$12,000 for pension, and \$12,000 for gratuity).
Further particulars and application forms may be obtained from the Association of Commonwealth Universities (ACU), 36 Gordon Square, London WC1H 0PF, or from the Appointments Unit, Secretary's Office, University of Hong Kong, Pokfulam, Kowloon. The closing date for applications is 30 November 1981.
THE81

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY

Applications are invited for the following positions:
Lecturer/Senior Lecturer (Communications Engineering)
Department of Electrical and Communications Engineering
A vacancy exists for a Lecturer/Senior Lecturer in Digital Electronics. A higher degree and teaching qualification preferred and practical experience of micro-processors and their applications is required.
Initial contract period is for 3 years.
Closing date: 10 November 1981.
Lecturer (Quantity Surveying)
Department of Architecture and Building
The applicant will be required to teach Quantity Surveying, and in at least two of the following areas: Building Construction, Building Services, Project Management, Architectural Design. Applicants should be members of an appropriate professional institution and have had previous professional and teaching experience.
Initial contract period is for 3 years.
Closing date: 30 October 1981.
Salary: Lecturer - K14,400; Lecturer II - K18,360; Senior Lecturer - K18,195 (K1 = K1.2704 (S\$10.832 NZ\$1.7642 approx.).
Benefits include a gratuity of 24% used as 20% superannuation and retirement fees, leave for staff member and family after 18 months of service, settling in and out allowances, six weeks paid leave per year, education fees and assistance towards school fees, free housing, salary continuation and medical benefit schemes are available.
Detailed applications (two copies) with curriculum vitae, together with the names and addresses of three referees, should be sent to: The Registrar, Papua New Guinea University of Technology, PO Box 782, Lae, Morobe Province, Papua New Guinea. Applicants resident in the United Kingdom should also send a copy to the Association of Commonwealth Universities (ACU), 36 Gordon Square, London WC1H 0PF, from whom further information can be obtained.
THE81

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY DEPARTMENT OF CIVIL ENGINEERING PROFESSOR AND HEAD OF DEPARTMENT

Applications are invited for the post of Professor of Civil Engineering and Head of Department of Civil Engineering. The Department is responsible for the education of professional engineers in the fields of structural, hydraulic, public health engineering, hydro power, soil engineering and transport. These sub-disciplines are expanding and the Department is seeking to recruit a Professor who will lead the Department in its expansion. The Department has an academic staff of thirteen and is in the process of recruiting its own graduates in its teaching programme. It also has nine technical officers and some bursars. The Department is very active in consulting and testing work for industry, government and local communities and an interest in the social and economic development of emergent nations is desirable in the successful applicant.
Salary: K21,285 plus Head of Department allowance K1,100 per annum (K1 = K1.2704 (S\$10.832 NZ\$1.7642 approx.).
Initial contract period of approximately three years, other benefits include a gratuity equal to 24% used as 20% superannuation and retirement fees and leave for staff member and family after 18 months of service, settling in and out allowances, six weeks paid leave per year, education fees and assistance towards school fees, free housing, salary continuation and medical benefit schemes are available.
Detailed applications (two copies) with curriculum vitae, together with the names and addresses of three referees, should be sent to the Registrar, Papua New Guinea University of Technology, PO Box 782, Lae, Morobe Province, Papua New Guinea. Applicants resident in the United Kingdom should also send a copy to the Association of Commonwealth Universities (ACU), 36 Gordon Square, London WC1H 0PF, from whom further information can be obtained.
THE81

UKRAINIAN STUDIES/HISTORY/POLITICAL SCIENCE

The Faculty of Arts of York University has an opening for three years (July 1982-June 1985) for a specialist in Ukrainian history and/or politics. Final salary approx. \$28,000 per annum. The position is full-time, with a teaching load of 12 hours per week. The position is in the Department of History and/or Political Science.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

LONDON UNIVERSITY OF READERSHIP IN HISTORICAL MEDICAL SCIENCE

The above position is a full-time readership in the Department of History and/or Political Science, University of London. The position is in the Department of History and/or Political Science.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

THE OPEN UNIVERSITY FACULTY OF SOCIAL SCIENCES

Applications are invited for two Lectureships in Psychology (40% 1982/83) and two Lectureships in Social Sciences (40% 1982/83). The Open University, Milton Keynes MK1 1AA, is seeking applications for two Lectureships in Psychology and two Lectureships in Social Sciences. The position is in the Faculty of Social Sciences.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

UNIVERSITY OF STRATHCLYDE

Applications are invited for a
Research Assistant/
Research Fellow
In the Department of
Administration
To work on an SSRC-funded project on central/local government relationships in Scotland. The successful applicant will be required to undertake research and teaching in the Department of Administration. The position is in the Department of Administration.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

BATH UNIVERSITY OF LECTURER IN STATISTICS

Applications are invited for the post of Lecturer in Statistics. The position is in the Department of Statistics.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

LONDON UNIVERSITY COLLEGE DEPARTMENT OF RESEARCH ASSISTANT

Applications are invited for the post of Research Assistant. The position is in the Department of Research.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

NEW ZEALAND UNIVERSITY OF WAIKATO LECTURER/SENIOR MANAGEMENT STUDIES (MARKETING)

The Department of Management Studies of the University of Waikato invites applications for the post of Lecturer/Senior Lecturer in Marketing. The position is in the Department of Management Studies.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

NEW ZEALAND PALMERSTON NORTH MASSEY UNIVERSITY

Applications are invited for the post of Lecturer in Veterinary Pathology. The position is in the Department of Veterinary Pathology.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

THE OPEN UNIVERSITY FACULTY OF TECHNOLOGY

Applications are invited for the post of Lecturer in Technology. The position is in the Faculty of Technology.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

LIVERPOOL DEPARTMENT OF BUSINESS LECTURER II/ HUMAN RELATIONS

Applications are invited for the post of Lecturer II in Human Relations. The position is in the Department of Business.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

MANCHESTER POLYTECHNIC DEPARTMENT OF BUSINESS LECTURER II/ HUMAN RELATIONS

Applications are invited for the post of Lecturer II in Human Relations. The position is in the Department of Business.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

Polytechnics



LECTURER II/SENIOR LECTURER IN DESIGN HISTORY/THEORY AND LECTURER II/SENIOR LECTURER IN ART AND CULTURAL STUDIES

Required 1st January 1982 two Lecturer II/Senior Lecturers in Design History/Theory and Art and Cultural Studies for BA (Hons) degrees in Fine Art, Ceramics, Wood, Metal and Plastics, Graphic Design, Carpentry and Related Textiles and for Foundation Courses.
Closing date: 2nd November, 1981.
Details and application forms from:
Establishment Clerk
The Polytechnic
Wolverhampton WV1 1BB
or Tel: Wolverhampton (0902) 710654 (ansaphone).
THES3

City of Birmingham Polytechnic HEAD OF DEPARTMENT OF ELECTRICAL ENGINEERING

Applications are invited for the post of:
HEAD OF DEPARTMENT OF
ELECTRICAL ENGINEERING
Salary Scale:
Head of Department (Grade V)
£13,814-£16,462
Further details and application forms (to be returned by 8th November, 1981) from: The Personnel Officer, City of Birmingham Polytechnic, 1st Floor, Perry Barr, Birmingham, B42 2SU. Tel: 021 368 9193, Ext. 215.
THES3

SHEFFIELD CITY POLYTECHNIC DEPARTMENT OF PHYSICAL EDUCATION 8 HUMAN MOVEMENT STUDIES

LECTURER II IN BIOMECHANICS
Salary: £8,482-£10,451 per annum
Applications are invited for this post which is available from 1st January 1982. The successful applicant will be required to teach Biomechanics in the Department of Physical Education. The position is in the Department of Physical Education.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

BRIGHTON POLYTECHNIC DEPARTMENT OF BUSINESS LECTURER II/ HUMAN RELATIONS

Applications are invited for the post of Lecturer II in Human Relations. The position is in the Department of Business.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

THESIDE POLYTECHNIC DEPARTMENT OF ELECTRICAL ENGINEERING

Due to expansion in the Department of Electrical Engineering, applications are invited for the post of:
LECTURER II/SENIOR LECTURER
IN ELECTRICAL ENGINEERING
To share teaching and research responsibilities in the Department of Electrical Engineering. The successful applicant will be required to teach Electrical Engineering in the Department of Electrical Engineering.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

MANCHESTER POLYTECHNIC DEPARTMENT OF LAW

Applications are invited for the post of Lecturer in Law. The position is in the Department of Law.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

NEWCASTLE UPON TYNE POLYTECHNIC School of Economics LECTURER II

The above School wishes to recruit a Lecturer II to share in the teaching of its degree and undergraduate courses. An interest in research in economics is encouraged. This post is tenable from January 1982.
This post is additional to the recently advertised vacancy for a Microeconomist.
Bursary: £11,111 - £16,462-£18,431 per annum.
For further details and application forms (returnable by 30th October 1981), please call our 24 hour telephone consumer service (0632 323126) or send a stamped addressed envelope to the Personnel Officer, Newcastle upon Tyne Polytechnic, Ellison Building, Ellison Place, Newcastle upon Tyne NE1 8ST.
THES3

General Vacancies

LONDON WORKERS' EDUCATIONAL ASSOCIATION GENERAL SECRETARY

Applications are invited from suitably qualified candidates for the post of General Secretary to the Workers' Educational Association.
Particulars of the appointment are obtainable from:
General Secretary, Workers' Educational Association, 100, Tottenham Court Road, London W1P 0LP.
THES3

Colleges of Technology

BOLTON INSTITUTE OF TECHNOLOGY ELECTRICAL ENGINEERING DEPARTMENT

Applications are invited for the posts of:-
SENIOR LECTURER
(£9,624-£11,328 (bar)-£12,141)
and
LECTURER I
(£5,034-£8,658)

The work of the department covers electronics, communications, instrumentation, control, computers, power and machines.
The department offers a Higher Diploma and C.N.A.A. Honours Degree in Electronic Engineering by full-time study and T.E.C. Higher Certificate in Electrical and Electronic Engineering and Industrial Measurement and Control by part-time study.
A full-time TOPS course leading to the TEC Higher Certificate in Industrial Measurement and Control is due to commence in January 1982.
The above courses include a variety of courses supported under the Department of Industry M.A.P. project.
Graduate engineers with industrial or research experience in any of the department's interests will be considered. The lack of previous teaching experience should not deter applicants from applying. Preference will be given to those with recent experience in modern electronic and communications systems. Candidates should be interested in research and the development of industrial links.
The Lecturer I vacancy is offered on a temporary full-time basis, for one year, from the date of appointment in the first instance, with the possibility of renewal.
An application form and further particulars may be obtained from the Vice-Principal, Bolton Institute of Technology, Deane Road, Bolton, BL3 5AB to whom completed forms should be returned by 8th November 1981.
THES3

Strathclyde Department of Education GLASGOW COLLEGE of TECHNOLOGY

Applications are invited for the undermentioned post. All candidates should have relevant industrial or commercial experience where appropriate. Teacher training would be an advantage but training can be given on an in-service basis.
LECTURER
GLASGOW COLLEGE OF TECHNOLOGY
Covewood Road, Glasgow, G4.
COMPUTER STUDIES Lecturer 'A'
Applications are invited from persons with good academic qualifications and a specialist interest and experience in one or more of the following areas - Systems Analysis and Design, Microprocessors, Data Base or Computer Networks.
Salary: Senior Lecturer 'A' - £11,112-£12,357 (Bar)-£14,019.
Forms of application and further particulars can be obtained from the College, to whom completed applications should be returned not later than two weeks after the appearance of this advertisement.
EDWARD MILLER,
Director of Education
THES3

Colleges of Further Education

LONDON INNER LONDON EDUCATION AUTHORITY RAMMERHAMPTON AND WEST LONDON COLLEGE OF TECHNOLOGY DEPTN W14 9BL

Applications are invited from qualified candidates for the post of Lecturer in the Department of Business Studies. The position is in the Department of Business Studies.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

Technical Colleges

SOUTHAMPTON COLLEGE OF HIGHER EDUCATION PRINCIPAL LECTURER IN BUSINESS STUDIES

Applications are invited from suitably qualified candidates for the post of Principal Lecturer in Business Studies. The position is in the Department of Business Studies.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

MANCHESTER POLYTECHNIC DEPARTMENT OF LAW

Applications are invited for the post of Lecturer in Law. The position is in the Department of Law.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

Colleges of Higher Education

Canterbury Christ Church College of Higher Education COLLEGE CHAPLAIN (Re-advertisement)

Applications are invited for the post of Chaplain at this College of Higher Education. The successful applicant will be required to provide spiritual and pastoral care for the students of the College. The position is in the Department of Chaplaincy.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

SCHOOL OF INFORMATION STUDIES RESEARCH OFFICER

Applications are invited for a Research Officer to take part in an investigation of the implications of new technology in the microcomputer and wordprocessing fields. The project is associated with developments in the microcomputer and wordprocessing fields. Applicants should have a good relevant honours degree and research experience would be an advantage.
Salary: £5,034 p.a.
(N.B. This is a 1 year appointment)
Closing date for receipt of completed application forms 2nd November, 1981.
Application forms and further details may be obtained from:
The Personnel Office
THES3

College of St. Mark & St. John BURSAR

Applications are invited for appointment to the post of Bursar at this College of Higher Education. The successful applicant will be required to manage the financial affairs of the College. The position is in the Department of Finance.
DUTIES: Undergraduate teaching in one or more of the following areas: History of the Ukraine; Eastern and Central European History in the 20th Century; Canadian History; Soviet Politics; Eastern European Politics; Slavic Society and Culture.
QUALIFICATIONS: Ph.D. for equivalent with research experience in Ukrainian history and/or politics.
APPLICATIONS: Curriculum vitae with names of three referees to: Professor H. M. Stevenson, Chairman, Department of Political Science, York University, 4700 Keele Street, Newmarket, Ontario, Canada M3J 1P3.
DEADLINE: December 15, 1981.
THE81

Hull College of Higher Education

Inglemere Avenue
Hull HU8 7LU
Tel. (0482) 446506

Clerk to Governor Council & Chief Administrative Officer

Applications are invited for this challenging senior post:
Salary: £12,680-£13,884
Application forms and further details of the post may be obtained from:
The Personnel Office
THES3

Hull College of Higher Education

Inglemere Avenue
Hull HU8 7LU
Tel. (0482) 446506

Research

Applications are invited for the post of Research Officer to take part in an investigation of the implications of new technology in the microcomputer and wordprocessing fields. The project is associated with developments in the microcomputer and wordprocessing fields. Applicants should have a good relevant honours degree and research experience would be an advantage.
Salary: £5,034 p.a.
(N.B. This is a 1 year appointment)
Closing date for receipt of completed application forms 2nd November, 1981.
Application forms and further details may be obtained from:
The Personnel Office
THES3

ASSISTANT LIBRARIAN

Applications are invited from Chartered or qualified librarians for the above post. Experience in academic libraries would be an advantage as would subject competence in the areas of education and the humanities.
Salary: £4484-£7137
Application forms and further details may be obtained from:
The Personnel Office
THES3

Hull College of Higher Education

Inglemere Avenue
Hull HU8 7LU
Tel. (0482) 446506

ST CATHERINE'S COLLE

Colleges of Art

LONDON
ILEA

Chelsea School of Art
Mentmore Road
London SW3 6LS
Tel: 01-351 3844

LECTURER II SCULPTURE
Chelsea School of Art wishes to appoint a Lecturer II in Sculpture (RA, RMA, RPS and Modern Degree courses). Applicants should have teaching experience and be practising artists. The post will entail tutorial responsibility and course planning with the Head of Department.

Salary: £5,462-10,431 plus London allowance of £750 (subject to formal approval).

Further details and application form may be obtained from the Senior Administrative Officer at the above address.

Closing date: 3 November 1981.

LONDON
BOROUGH OF MERTON
WIMBOROUGH SCHOOL OF ART

Applications are invited for the post of Head of Foundation Department (Grade 1). Salary in accordance with current Merton Regulations, within the range:

£10,797-£12,185, plus £155 London Allowance.

Further particulars and application form are available from: The Head, Wimbourn School of Art, Merton College, Wimbourn, WIMBOROUGH, Dorset, BH21 1QA. Telephone: 01-546 6231. Closing date: 3rd November 1981.

Adult Education

SURREY
HILLCROFT COLLEGE
PRINCIPAL

The Council of Hillcroft College invites applications for the post of principal of this new term residential adult education college for women. The College, recognised and granted by the Department of Education and Science, provides one and two-year full-time courses. The latter leading to a CIVA Certificate. Innovative educational work is being done and further developments are possible.

Candidates should be academically well qualified and have administrative and educational experience. The Principal is not required to be married.

For details, please write to or telephone: The Secretary, Hillcroft College, South Bank, Surrey, GU8 8SS. Completed applications must be submitted by October 30th.

Miscellaneous

LONDON
OUY'S HOSPITAL
DEPARTMENT OF CHILD
ADOLESCENT
PSYCHIATRY

SENIOR PSYCHOLOGIST

This is a multi-disciplinary department with Out-patient facilities, learning and day hospital. The person appointed will be expected to take part in teaching, assessment, behaviour therapy and individual group and family therapy. Research will be encouraged.

Applicants should have a good honours degree in psychology, post graduate qualification in clinical psychology and at least two years post qualification experience.

Salary £8995-£11375 per annum. For further information contact Mr. J. Williams, Clinical Psychologist, Tel: 01-407 7800.

Application forms from the Personnel Officer, Guy's Hospital, St Thomas' St, London SE1 8NT quoting ref. P58/8146

WEST SUSSEX
LANCING COLLEGE
INDEPENDENT SCHOOLS
HEAD OF DEPT.
DEPARTMENT

This post becomes available in September 1982, following the appointment of a Head of Department to the Lancing School of Art and Design. The post is a full-time position and involves the management of the school and its staff.

Applicants are invited from well-known art schools or universities. They should write to the Headmaster with a curriculum vitae and the names of three referees. H26

Announcements

A MEMORIAL SERVICE for the late Professor J. A. Thomas will be held at 11.00 am on Thursday, 19th November 1981, in the Church of Christ the King, Gordon Square, London WC1N 3AF. The service will be conducted by the Rev. Canon J. A. Thomas.

Overseas

Mining Engineering

University of Petroleum & Minerals
Dhahran, Saudi Arabia

The Department of Petroleum Engineering (mining engineering option) will have faculty positions open for the academic years 1981-82 (second semester, starting 20 February 1982) and 1982-83 (starting 1 September 1982).

Academic Qualifications and Experience:

PhD degree - with teaching and practical experience. Undergraduate mining courses include rock mechanics, surface and underground mining methods, mine plant design, mine economics and feasibility studies, mineral processing and extractive metallurgy, and mine surveying.

Language of instruction is English.

Minimum regular contract for two years, renewable. Competitive salaries and allowances. Air conditioned and furnished housing provided. Free

air transportation to and from Dhahran each year. Attractive educational assistance grants for school-age dependent children. All earned income without Saudi taxes. Ten months duty each year with two months vacation with salary. There is also possibility of selection for University's ongoing summer programme with good additional compensation.

Apply with complete résumé on academic, professional and personal data, list of references, publications and research details, and with copies of degrees and/or transcripts, including home and office addresses and telephone numbers to:

Dean of Faculty & Personnel Affairs, University of Petroleum & Minerals, P.O. Box 144, Dhahran International Airport, Dhahran, Saudi Arabia.



Queensland Conservatorium of Music

Lecturer/Senior Lecturer
In Brass

Applications are invited for the above position on the permanent staff of the Conservatorium. Duties will include individual tuition in brass instruments to students as required to enrolled students. The appointee may also be required to undertake the training of brass ensembles both large and small and to be responsible generally for the organisation and development of brass music within the Conservatorium.

Qualifications: A high level of skill and experience as a performer; teaching experience at tertiary level; appropriate tertiary qualifications in music or equivalent experience.

Salary: Salary will be payable in accordance with qualification and experience within a range applicable to Lecturer/Senior Lecturer in Colleges of Advanced Education, namely \$24,818 per annum to \$28,474 per annum.

Conditions of Appointment: The appointment will be on the terms and conditions relating to permanent academic staff in Colleges of Advanced Education which are available upon request. Duties will commence on 15th January 1982 or as soon as can be mutually arranged.

General: The Conservatorium has a total enrolment of approximately 900 students and provides diploma and degree courses in music in the fields of performance, teaching, composition, and music education, post graduate diplomas in special fields of study, and non course tuition. The Conservatorium is housed in an air-conditioned building adjacent to the Botanical Gardens. Facilities include an auditorium fully equipped for concerts, opera, and drama.

A brass ensemble, string quartet, and Big Band have been established and have achieved a high standard of performance.

Applications: Applications should be submitted in writing by 31st October 1981 to the Registrar, Queensland Conservatorium of Music, P.O. Box 26, North Quay 4000, enclosing personal particulars, age, marital status, details of academic qualifications, employment and relevant experience, together with the names and addresses of three referees. (M4855) THS12

UNIVERSITY OF
NORTH ALABAMA
Florence, Alabama 36632-0001

ENGLISH

The University of North Alabama invites applications and nominations for the Albert S. Johnston Distinguished

Professorship of English. This

and endowed distinguished

professorship, to begin August

23, 1982, is designed for an

outstanding scholar with an

earned doctorate and academic

background in Shakespeare

and 17th century English

poetry. Preference will be given

to the candidate who combines

a high rank of scholarly

research with effective

teaching performance. Letters

of nomination or application,

accompanied by resumes, to

be submitted not later than

November 27, 1981, should be

addressed to: Dean William L.

Crocker, Faculty and Instru-

ction, University of North

Alabama, Florence, AL

36632-0001, USA.

An Equal Opportunity Employer.

UNIVERSITY OF CAPE TOWN

ASSISTANT
LECTURESHIP
IN CLASSICS

Applications are invited for the above post which will be tenable from 1st January 1982. The appointment will be made according to qualifications and experience on the salary scale R8 620 - R8 970 - R9 075 - R12 345 per annum.

Applicants should submit a curriculum vitae, stating present salary, teaching and other relevant experience, research interests and publications, when available if appointed, and the names and addresses of three referees.

Further information should be obtained from the Registrar, Institution of Classical Studies, University of Cape Town, Rondebosch, 7700, South Africa, by whom applications (quoting ref. no. 128) must be received not later than 31st November 1981.

The University's policy is not to discriminate in the appointment of staff on the grounds of race, sex or religion. Further information on the implementation of this policy is obtainable from the Registrar.

THS12

Courses

M.A. or M.Sc.
by Negotiated
Studies

This degree has been devised to enable higher degree students to negotiate, within certain limits, a course of study best suited to their own personal needs and the forms of assessment which will be applied. Topics may be chosen from a variety of existing courses or may be by supervised independent study. A range of subjects is available and the course may be taken in one or two years. The next course will start in October 1982, and preliminary application is required by 1st November 1981. Further information from Professor G. Huggins, Department of Management Studies, Loughborough University, Leicestershire, LE11 3TU.

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